CATAWBA VALLEY COMMUNITY COLLEGE

2550 Hwy 70 SE • Hickory, North Carolina 28602
GENERAL CATALOG • Volume 42 • Number 1 • 2013-2014
Main Campus Telephone Number: 828-327-7000 • College Website: www.cvcc.edu

Catawba Valley Community College is accredited the Southern Association of Colleges and Schools Commission on Colleges to award Diplomas and Associate Degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Catawba Valley Community College.

Accredited by the Commission on Accreditation of Allied Health Education Programs, (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP)

Accredited by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Accreditation Review Committee on Education in Surgical Technology

Accredited by the Commission on Accreditation for Health Informatics and Information Management Education: Health Information Technology

Accredited by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Committee on Accreditation for Polysomnography

The Respiratory Therapy Program is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com). Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, Texas 76021-4244 (817) 283-2835

Accredited by the Commission on Dental Accreditation for Dental Hygiene

The Automotive Systems Technology Program is accredited by the National Institute of Automotive Service Excellence (ASE) upon the recommendation of the National Automotive Technician Education Foundation (NATEF)

The Computer-Integrated Machining Program is a Member of the Haas Technical Education Center Network

The Cosmetology program is accredited by the NC State Board of Cosmetic Arts

Accredited by the National League for Nursing Accrediting Commission: Associate Degree Nursing Program
[NLN, Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, GA, 30326, (404-975-5000) www.nlnac.org]

The Radiography program is accredited by the Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850 Chicago, IL 60606-3182, 312-704-5300 e-mail: mail@jrcert.org

Accredited by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Committee on Accreditation for Electroneurodiagnostic Technology

Approved by North Carolina State Board of Nursing

The Welding Technology Program is an Educational Institution Member designated by the American Welding Society

The Learning Assistance Center Peer Tutoring Program certified at Level 2 Advanced Certified Tutor by the College Reading and Learning Association International Tutor Program

Approved for Veteran Enrollment by North Carolina State Approving Agency for Veterans' Education

Member of
North Carolina Community College System • American Association of Community Colleges •
Southern Association of Colleges and Schools • Charlotte Area Educational Consortium • League for Innovation •
North Carolina Citizens for Business and Industry • Charlotte Regional Workforce Development Partnership

Catawba Valley Community College publishes this catalog for the purpose of providing students and other interested persons with information about the College and its programs. The provisions of the catalog are not to be regarded as an irrevocable contract between students and Catawba Valley Community College. The College reserves the right to change any provisions, policies, requirements, or schedules at any time or to add or withdraw course or program offerings. Every effort will be made to minimize the inconvenience such changes might create for students. Revisions are available on the CVCC website at www.cvcc.edu.

Since opening its doors to students in 1960, Catawba Valley Community College has existed as an "open-door" institution to persons of both sexes and all racial and ethnic groups. This admissions policy has been followed in all other spheres of student life ranging from activities to placement. Similarly, Catawba Valley Community College has made all personnel decisions including hiring, compensation, benefits and promotion on a nondiscriminatory basis.

The Board of Trustees of Catawba Valley Community College does hereby reaffirm this past stance by making a formal commitment to provide equal opportunity for employees and students. Catawba Valley Community does not discriminate on the basis of race, color, national orgin, sex/gender, religion, creed, age, or disability in its programs and activities. We recognize this obligation to be a moral as well as legal responsibility because of its intrinsic worth in a country in which all should have an equal chance to let their ability guide their life choices.

An Equal Opportunity/Affirmative Action Institution

2

Message From The President

When our doors opened in 1960 to the first 77 students, we began as the Catawba County Industrial Education Center. Today Catawba Valley Community College continues to evolve, as evident with our name changes, continued campus expansion, and the ever-changing community we serve.

The one core value on our campuses that remains consistent in today's global economy is our passion and commitment to improve the lives of the people we serve.

We continuously strive to prepare our workforce and provide access for transfer to four-year colleges and universities. CVCC is a catalyst in our community through intentional actions that lead to a positive return on investment for our stakeholders and our college.

CVCC graduates approximately 1100 students each year, in curriculum degrees and general education development dilomas. Our efforts to provide the best educational experience for our students is evident in the college's 96% student satisfaction rating.

Our students make us proud each year, winning regional and state competitions, and participating at national competitions while competing against large colleges and universities. They also hold a high success rate for those who continue their education at four-year institutions and are valued by employers in the unifour region, the state, and the country.

All of this is made possible by our employees, through their dedication to the classroom, and our students as we strive to become the Best Community College in America.

It is an honor to serve as President of Catawba Valley Community College. We welcome you to the Valley, and the opportunity to assist you in achieving your goals and dreams.

Dr. Garrett D. Hinshaw, President

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont.)

2012-2013 Institutional Calendar

FALL SEMESTER 2012

Faculty/Staff Professional Development Activities (No Curriculum Classes) .... August 13
Curriculum Instructional Work Day .... August 14
* Fall Curriculum Semester Begins .... August 15
Institutional Holiday .... September 3
Break for Curriculum Students .... September 3
Constitution Day Activities .... September 17
Fall Fling .... September 18
Mid-Semester Break for Curriculum Students .... October 8-13
Last Day to Withdraw from Curriculum Classes without Academic Penalty .... 50% Date of Class
Spring Semester Curriculum Registration Activities .... November
Break for Curriculum Students .... November 12
Institutional Holidays .... November 12
Break for Curriculum Students .... November 21-24
Institutional Holidays .... November 22, 23
Curriculum Exam Schedule .... December 12-18
Fall Curriculum Semester Ends .... December 18
Curriculum Snow Makeup Days .... December 19-22**
Institutional Holidays .... December 24-31

* While many classes begin during the first week of the semester, there are also classes which begin later in the semester.
Also, some classes do end before the last week of the semester. Please refer to the fall semester curriculum class schedule for specific class start and end dates.

SPRING SEMESTER 2013

Institutional Holiday .... January 1
No Curriculum Classes .... January 2
Curriculum Instructional Work Day .... January 3
Faculty/Staff Professional Development Activities (No Curriculum Classes) .... January 4
* Spring Curriculum Semester Begins .... January 7
Institutional Holiday .... January 21
Break for Curriculum Students .... March 30 - April 5
Institutional Holiday .... April 1
Curriculum Snow Makeup Days .... March 30 - April 5
Last Day to Withdraw from Curriculum Classes without Academic Penalty .... 50% Date of Class
Summer Semester Curriculum Registration Activities .... April
Awards Day .... April 11
Spring Fling April1 10
Curriculum Exam Schedule .... April 30 - May 6
* Spring Curriculum Semester Ends .... May 6
Commencement .... May 3-4

* While many classes begin during the first week of the semester, there are also classes which begin later in the semester.
Also, some classes do end before the last week of the semester. Please refer to the spring semester curriculum class schedule for specific class start and end dates.

SUMMER SEMESTER 2013

* Summer Curriculum Semester Begins .... May 20
Institutional Holiday .... May 27
GED Commencement .... May 30
Last Day to Withdraw from Curriculum Classes without Academic Penalty .... 50% Date of Class
Break for Curriculum Students .... July 4-6
Institutional Holiday .... July 4
Fall Semester Curriculum Registration Activities .... June/July
* Summer Curriculum Semester Ends .... July 30

* While many classes begin during the first week of the semester, there are also classes which begin later in the semester.
Also, some classes do end before the last week of the semester. Please refer to the summer semester curriculum class schedule for specific class start and end dates.

Note: Please check the CVCC website (www.cvcc.edu) for calendar and registration updates.

2013-2014 Institutional Calendar

FALL SEMESTER 2013

Faculty/Staff Professional Development Activities (No Curriculum Classes)	August 12
Curriculum Instructional Work Days	August 13-14
*Fall Curriculum Semester Begins	August 15
Institutional Holiday	September 2
Constitution Day Activities	September 17
Fall Fling/Student Appreciation Day	September 18
Mid-Semester Break for Curriculum Students	October 14-19
Last Day to Withdraw from Curriculum Classes without Academic Penalty	50% Date of Class
Break for Curriculum Students (No Curriculum Classes)	November 10
Institutional Holiday	November 11
Break for Curriculum Students	November 27-30
Institutional Holidays	November 28-29
Spring Registration	November/December
*Fall Curriculum Semester Ends	December 18
*Snow MakeUp Days (If Necessary Due to Inclement Weather)	December 19, 20, 21
Institutional Holidays	December 23-31

> * While many classes begin during the first week of the semester, there are also classes which begin later in the semester. Also, some classes do end before the last week of the semester. Please refer to the fall semester curriculum class schedule for specific class start and end dates.

SPRING SEMESTER 2014

Institutional Holiday	January 1
CVCC Open	January 2
Faculty/Staff Professional Development Activities (No Curriculum Classes)	January 6
Curriculum Instructional Work Days	January 6-7
*Spring Curriculum Semester Begins	January 8
Institutional Holiday	January 20
Last Day to Withdraw from Curriculum Classes without Academic Penalty	50% Date of Class
Summer Registration Activities	April
Spring Fling/Student Appreciation Day	April 9
Mid-Semester Break for Curriculum Students	April 14 - 17
* Snow Makeup Days (If Necessary Due to Inclement Weather)	April 14, 15, 16, 17
Institutional Holiday	April 18
Awards Day	April 24
*Spring Curriculum Semester Ends	May 7
Commencement Activities	May 2-3

> * While many classes begin during the first week of the semester, there are also classes which begin later in the semester. Also, some classes do end before the last week of the semester. Please refer to the spring semester curriculum class schedule for specific class start and end dates.

SUMMER SEMESTER 2014

*Summer Curriculum Semester Begins	May 19
Institutional Holiday	May 26
Last Day to Withdraw from Curriculum Classes without Academic Penalty	50% Date of Class
GED Commencement	June 5
Break for Curriculum Students	July 3-5
Institutional Holiday	July 3
Fall Registration Activities	June/July
*Summer Curriculum Semester Ends	July 29

> * While many classes begin during the first week of the semester, there are also classes which begin later in the semester. Also, some classes do end before the last week of the semester. Please refer to the summer semester curriculum class schedule for specific class start and end dates

Note: Please check the CVCC website (www.cvcc.edu) for calendar and registration updates.

General Information

CVCC Main Campus

CVCC Alexander Center for Education

CVCC Newton Center

CVCC East Campus

GENERAL INFORMATION

MISSION STATEMENT

Catawba Valley Community College is an innovative, comprehensive community college that fosters an environment focused on Academic Excellence, Globalization and Diversity, Economic and Workforce Development, and Student and Community Engagement to empower individuals and enrich the community through premier educational programs and services centered on teaching and learning.

VISION STATEMENT

The vision of Catawba Valley Community College is to be the standard of excellence for programs, services, and facilities for community colleges in the nation.

HISTORY

Through the concerted efforts of concerned and united Catawba County citizens and North Carolina educational leaders, on April 3, 1958, Catawba Valley Community College was established by the North Carolina Department of Public Instruction as the ninth school of its kind in the state.

Construction of the original facilities began in 1959. The 40,000 square foot building costing approximately $500,000 was completed in August 1960. An initial enrollment of seventy-seven (77) students began classes in September of the same year. From 1960 to 1963, the College operated under the jurisdiction of the Catawba County Board of Education. During this time the College was known as the Catawba County Industrial Education Center.

In July 1963, the General Assembly of North Carolina enacted into law G.S. 115A which provided for the establishment of the present North Carolina System of Community Colleges. On January 9, 1964, Catawba Valley Technical Institute was among the original seven institutes chartered by the Department. At that time, CVTI established its own Board of Trustees and began operation as a member of the Department of Community Colleges. Thus, it was in August 1964, that the College awarded its first Associate Degree in Applied Science.

It was during the transition from an Industrial Education Center to Technical Institute that great strides began in expanding educational programs, increasing student enrollment, developing quality instruction, adding facilities, and increasing community acceptance and service. On September 1, 1979, the name of the institution was changed to Catawba Valley Technical College by the Trustees and commissioners of Catawba County. On December 1, 1987, the State Board of Community Colleges officially approved CVTC to become Catawba Valley Community College and the College Transfer program was approved. The College continues as a publicly supported coeducational institution.

LOCATION

Catawba Valley Community College, is located in Hickory on Highways 70 and 321-B, in Catawba County, North Carolina. Situated in the heart of the Piedmont some 1,175 feet above sea level, CVCC is easily accessible over Interstate 40, Highways 321, 70, 16 and 127. It is within seven miles of a commercial airport and approximately 50 miles from metropolitan Charlotte.

The campus covers approximately 162 acres and includes 16 buildings for an approximate total of 600,000 square feet of floor space. In addition, there is a Cosmetology Center at the CVCC Newton Center in downtown Newton and the Workforce Development Center at the East Campus. The Alexander Center for Education, a 15,000 square foot building situated on 4.72 acres at 345 Industrial Boulevard in Taylorsville was purchased by Alexander County in 2000 as an off-site center, which opened for classes March 28, 2003. The facilities consist of modern brick buildings. Included is a 25,000 volume library for the use of both students and public, a student center and food service area for leisure relaxation and entertainment, and numerous classrooms and laboratories.

CVCC POLICIES AND PROCEDURES

CVCC policies and procedures regarding students are available for reference on the CVCC website (www.cvcc.edu) under the About Us Link. Following are the direct links, CVCC Policies - http://www.cvcc.edu/About_Us/Policies/ and CVCC Procedures - http://www.cvcc.edu/About_Us/Procedures/. These web pages include, but are not limited to, information regarding admissions, course grading, student conduct, student due process, privacy of students, visitors on campus, sexual offense/assault protocol, campus safety and security, and reporting a crime. Printed copies of a policy/policies, or procedure/procedures are available upon request to Student Services.

TRANSFER OF CVCC CREDITS TO OTHER COLLEGES

Technical, vocational, and certificate programs of study at Catawba Valley Community College have been established primarily to prepare individuals for employment upon completion of studies. The College Transfer program has been developed at CVCC to provide opportunities for students to transfer two years of academic credit to senior colleges and universities. Numerous differences exist in the transfer policies of senior institutions. Therefore, details regarding a specific institution should be obtained from the senior institution to which transfer is being considered.

EDUCATIONAL CONSORTIUM

Catawba Valley Community College is a member of the Charlotte Area Educational Consortium (CAEC). This organization is composed of 24 colleges and universities working toward attaining the highest level of collegiate and university education for the Charlotte Metrolina region. Consortium members encourage the sharing of resources and energies among institutions and seek to generate creative ideas for the most effective use of human and other resources available among institutions.

Foremost among the goals of the Consortium is to afford students access to broader educational experiences, both curricular and extra-curricular. Full-time students at regular member colleges and universities are eligible to participate in the inter-institutional student exchange program of the Consortium. This enables them under certain circumstances to enroll in some courses at other CAEC schools without paying additional fees. For additional information on the CAEC and member institutions, please contact the Director of Student Records.

AIR FORCE ROTC PROGRAM

To prepare themselves to serve as commissioned officers in the Air Force, students in college transfer programs to pursue a bachelor's degree may participate in the Air Force Reserve Officer Training Corps (ROTC) offered by the UNC-Charlotte Department of Aerospace Studies. Information is available in Student Services or on the UNCC webpage at the following address: www.coas.uncc.edu/afrotc/.

APPALACHIAN CENTER AT HICKORY

The Appalachian State University Center in Hickory is an educational consortium of colleges and universities that offer community college students and other adults opportunities to finish their bachelors degrees from one of the participating colleges and universities. Graduate degrees are also available. A wide variety of degree programs are offered with flexible part-time and full-time schedules and face-to-face and on-line formats to meet the needs of adult learners with busy schedules, families, and work commitments. For more information on degree programs available through the Appalachian State University Center in Hickory, call 828-324-6966.

CHALLENGER EARLY COLLEGE HIGH SCHOOL

Challenger Early College High School is an application-based, selected enrollment high school and joint oversight project of the Catawba Valley Education Consortium. It is not a traditional, comprehensive high school. Enrollment is limited to no more than 400 students who must enter as high school freshmen only. Note: there are minors enrolled at CECH on CVCC's campus. Challenger students graduate with a university prep curriculum high school diploma and college credit up to an Associates degree from CVCC. Supported by the NC Dept of Public Instruction, NC Community College System, and NC New Schools Project, the early college is a national school reform model designed through research from the Bill and Melinda Gates Foundation, Stanford University, Harvard University, and Jobs for the Future.

ACCREDITATION

Catawba Valley Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award diplomas and associate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, or call 404-679-4500 for questions about the accreditation of Catawba Valley Community College. Most curriculum programs offered have been approved by the North Carolina State Approving Agency for Veteran's Education; however, students should contact the VA certifying official in Student Services for verification. The College is also a member of the American Association of Community Colleges. The Associate Degree Nursing Program is approved by the North Carolina State Board of Nursing and accredited by the National League for Nursing Accrediting Commission, Inc., (NLN, Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, GA, 30326, 404-975-5000). The program in dental hygiene is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "approval without reporting requirements." The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611. The Emergency Medical Science program is accredited by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Joint Review Committee on Educational Programs for the EMT-Paramedic. The Health Information Technology program is accredited by the Commission on Accreditation for Health Information and Information Management Education. The Polysomnography program is accredited by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Committee on Accreditation for Polysomnography. The Radiography program is accredited by the Joint Review Committee on Education in Radiologic Technology 20 North Wacker Drive, Suite 2850 Chicago, IL 60606-3182, (312) 704-5300, e-mail: mail@jrcert.org. The Respiratory Therapy Program is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com). Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, Texas 76021-4244 (817) 283-2835. The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Accreditation Review Committee on Education in Surgical Technology and the commission's Council on Accreditation and Unit Recognition. The Cosmetology program is accredited by the NC State Board of Cosmetic Arts. The Automotive Systems Technology program is accredited by the National Institute of Automotive Service Excellence (ASE). The Learning Assistance Center Peer Tutoring Program is Level 1 Tutor Certified by the College Reading and Learning Association International Tutor Program.

CRITICAL SUCCESS FACTORS

"In 1993, the State Board of Community Colleges began monitoring performance data on specific measures to ensure public accountability for programs and services. In 1998, the General Assembly directed theState Board to review past performance measures and define standardsto ensure programs and services offered by community colleges in North Carolina were of sufficient quality" (North Carolina CommunityCollege System, 2012 Critical Success Factors Report, July 2012). The NCCCS Critical Success Factors Report is the means by which the community college system reports on performance measures referredto as Critical Success Factors. In February 1999, the North Carolina-State Board of Community Colleges originally adopted twelve (12) performance measures to ensure that programs and services offered by community colleges were of sufficient quality. During the 2010-2011 reporting year, the number of measures was dropped to seven (7). These performance standards focus primarily on student success and serve as the System's major public accountability tool. CVCC met the standards for all seven (7) of the performance measures, and received Recognition of Exceptional Institutional Performance.

NOTICE OF NON-DISCRIMINATION

Catawba Valley Community College does not discriminate on the basis of race, color, national origin, sex/gender, religion, creed, age, or disability in its programs and activities. The following persons have been designated to handle inquiries regarding the non-discrimination policies.

Vice President (Enrollment Support Services)
2550 Highway 70 SE
Hickory, NC 28602-8302
Telephone – (828) 327-7000

Director of Human Resources
2550 Highway 70 SE
Hickory, NC 28602-8302

Telephone – (828) 327-7000

Catawba Valley Community College • 2012 Summary Report of Critical Success Factors

Core Indicators of Success	NCCCS Performance Standards	CVCC Results
Passing Rates on Licensure & Certification Exams	For first-time test takers, 80% aggregate passing rate; no single exam below 70%	86% aggregate passing rate for all programs with no single examples below 70%
*Performance of College Transfer Students	83.0% of CVCC transfers must have a G.P.A. of 2.0 or higher after two (2) semesters at a UNC institution (Exceptional Institutional Performance Standard is 88% for 2012 Report)	89 % of 2009-2010 transfer students had a GPA of 2.0 or higher
*Passing Rates of Students in Developmental Courses	75% of students will complete developmental English, math, or reading with a grade of "C" or better for that course	77% had a grade of "C" or better
*Success Rates of Developmental Students in Subsequent College courses	80% of students who completed a developmental course in 2008-09 and completed subsequent college level (English and math) courses in 2009-10 will have a passing grade for the college level courses	91% had a passing grade for subsequent college level courses
Satisfaction of Program Completers & Noncompleters	90% of respondents will report satisfaction with the quality of the College's programs and services	96% indicated that programs and services met or exceeded expectations
*Curriculum Students Retention & Graduation	65% fall credential - seeking students either have completed their program, enrolled the following fall, or transferred to another community college or university one year later	75% completed their program or enrolled the following fall semester
* Client Satisfaction with Customized Training	90% of organizations surveyed satisfied with services provided	94% of organizations satisfied with services
* Program Unduplicated Headcount Enrollment	Three-year average annual headcount minimum of ten (10) students	All programs had a three-year average annual head count minimum enrollment of ten (10) students

For further information and statistics, please visit the
2012 Critical Success Factor Report: July 2012 (North Carolina Community College System)
web page at http://www.nccommunitycolleges.edu/Publications/docs/Publications/csf2012.pdf .

ADMISSIONS

GENERAL

CVCC follows "open door" admissions policies as established by the North Carolina Community College System. Admission is open to persons who are legal residents of the United States and who are either high school/GED graduates or who are at least 18 years of age. High school students may be admitted through the North Carolina Community College System - Career and College Promise program. Please visit the link at: http://www.nccommunitycolleges.edu/programs/ccp.htm.

Admission to the College does not necessarily mean admission to the curriculum or program desired by the applicant. A student must satisfy the admissions requirements for his/her program of study. Applicants will be admitted to programs as admissions requirements are completed except for programs with limited enrollment (discussed further below). Applicants may be admitted to certain programs on a provisional basis until all admissions requirements are completed. The Director of Health Services Admissions or designee will maintain appropriate documentation of the specific admissions requirements for each curriculum program in the School of Health and Public Services and will provide appropriate communication of those admissions requirements.

Enrollment in certain programs is limited, and admission is competitive. The admissions committee for each limited enrollment program will select the most academically qualified applicants. Applicants to health services programs must complete the minimum admissions requirements established by the admissions committee for the program to be considered in the competitive admissions process. These minimum admissions requirements may include, but are not necessarily limited to, attendance at information sessions, completion of aptitude tests, submission of recommendations, vaccinations, and/or health examination. Additional information regarding specific criteria may be obtained from the Director of Health Services for the program of interest.

Graduation from a public high school, private high school - including home schools, a GED or Adult High School Diploma, or a correspondence school is required for admission to all associate degree programs and certain diploma and certificate programs. If graduation from high school or equivalent is a requirement for the intended program, applicants must provide official transcripts (from high school or state GED Office/GED Administrator) evidencing graduation. The high school transcript requirement is waived for associate degree program applicants who have graduated from a regionally accredited two-year or four-year college, except for applicants to certain programs in the School of Health and Public Services, students receiving VA education benefits, and students who are applying for federal/state financial aid.

Applicants to curriculum programs of study must provide official transcripts from all regionally accredited colleges/universities previously attended.

To fulfill the college's general admission requirements, students who have attended foreign schools at the secondary level (high school) must submit transcripts that are written in or translated into the English language. Translated secondary level transcripts must be literal (word for word) and the translator must sign the translated copy and include contact information. The name the student is currently using should appear on the transcript as well as the date of birth. NOTE: If the official translation does not indicate US high school equivalency, the student will be required to obtain translation through a current member of National Association of Credential Evaluation Services (NACES).

To fulfill the college's general admission requirements, students who have attended foreign schools at the post-secondary level (college/university) must submit transcripts that have been translated into the English language. Translated transcripts must be literal (word for word) and the translator must sign the translated copy and include contact information. The name the student is currently using should appear on the transcript as well as the date of birth. Students desiring transfer credit must submit transcripts that have been evaluated by a current member of NACES at www.naces.org. (The name the student is currently using should appear on the transcript as well as the date of birth).

Note: The evaluating agency for post-secondary transcripts (college/university) or translator for secondary transcripts (high school) must send the evaluation report directly to Catawba Valley Community College's Student Records Office. Student copies of evaluations will not be accepted.

CVCC may admit undocumented immigrant applicants consistent with provisions of federal and state laws and regulations in Title 23 of the North Carolina Administrative Code. Under current State law, undocumented immigrant applicants do not qualify for federal or state financial aid, in-state residency for tuition and shall be charged at the out-of state tuition rate for curriculum programs.

No veteran may be certified for Veterans Educational Assistance Benefits (G.I. Bill) until all admissions requirements have been met and an unconditional acceptance has been granted.

Applicants to the College will be held to and shall maintain the same behavior standards as those students who are enrolled (see Student Conduct and Due Process).

ADMISSION PROCEDURES

The application and enrollment process at CVCC may take 1-3 weeks, depending on the applicant's program of study. Many programs at CVCC require that you be a high school graduate or have a GED before you enroll. Some programs of study at CVCC are LIMITED ENROLLMENT; some have additional admissions requirements that must be completed earlier in the academic year(s).

Following are the general procedures to apply for admission to a curriculum program of study. Please be aware that on certain days, (Advising and Registration periods), new applications to the College are not processed due to service to current CVCC students:

1. Individuals who have never attended college or former CVCC students who have not been enrolled for one year should attend a "Starting Points" Information Session. This 45 minute session is an opportunity to aid future students in understanding the admission, placement test and financial aid processes. Sessions are offered on various days at various times; schedules are posted on the CVCC homepage.

2. Complete the paper Application to the College using blue or black ink or apply online. **ALL applicants must bring a photo ID and meet with admissions staff to activate the application.**

3. Prepare for and take any necessary placement tests as determined by Admissions Staff. There is no fee for placement testing, but it is offered by appointment only. Admissions Staff will assist applicants with an appointment day and time.

4. Send official high school/GED transcripts to CVCC. In addition, send official college transcripts from every institution applicant has attended, SAT scores, ACT scores or placement test scores from another institution. Contact the College Registrar or College Records of all previous schools/colleges to request official transcripts. There may be fees for transcripts at certain schools. Send all official documents to CVCC Student Records, 2550 Highway 70 SE, Hickory, NC 28602.

5. Applicants for health care programs of study must secure all official transcripts and bring them to the college when activating an application. High school and college transcripts must be presented along with the application or already on file in the Student Records Office before an application can be processed.

6. Apply for financial aid by completing the Free Application for Federal Student Aid (FAFSA). Complete the online version of the FAFSA at www.fafsa.ed.gov; there are semester deadlines for filing the FAFSA. The FAFSA code for CVCC is 005318. Students cannot become eligible for Financial Aid until they successfully complete the FAFSA on-line. **Financial Aid is not final until a student has received an award letter via e-mail from the CVCC Financial Aid Office.** If a student is going to use Veteran's Administration benefits, visit their website at http://www.gibill.va.gov/GI_BILL_Info/education_forms.htm. If a student is using TAA or WIA benefits, complete the FAFSA. Not all educational programs at CVCC are eligible for TAA/WIA benefit coverage.

CHALLENGER EARLY COLLEGE HIGH SCHOOL

Challenger Early College High School is an application-based, selected enrollment high school and joint oversight project of the Catawba Valley Education Consortium. It is not a traditional, comprehensive high school. Enrollment is limited to no more than 400 students who must enter as high school freshmen only. Note: there are minors enrolled at CECH on CVCC's campus. Challenger students graduate with a university prep curriculum high school diploma and college credit up to an Associates degree from CVCC. Supported by the NC Dept of Public Instruction, NC Community College System, and NC New Schools Project, the early college is a national school reform model designed through research from the Bill and Melinda Gates Foundation, Stanford University, Harvard University, and Jobs for the Future.

PROGRAM FOR STUDENTS WITH DISABILITIES.

A program of services is provided for students with disabilities. Individuals with disabilities (as defined in the Americans with Disabilities Act of 1990) wishing to make a request for reasonable accommodation or wishing to file a complaint of alleged discrimination on the basis of disability should contact the CVCC Program for Students with Disabilities Office. **It is the student's responsibility to request these services**. Current documentation of the disability by an appropriate professional may be required. All information is kept confidential. Students will be required to sign a release of information form before any special contact is made to arrange accommodations. Requests for reasonable accommodation should be made several weeks in advance to allow sufficient time for accommodations to be arranged.

SPECIAL ADMISSIONS REQUIREMENTS FOR HEALTH PROGRAMS.

In addition to the general procedures to apply for admission to a curriculum program of study, applicants for the health programs must complete other procedures.

Applicants for health care programs of study must secure all official transcripts and bring them to the college when activating an appliation. High school and college transcripts must be presented along with the application or already on file in the Student Records Office before an application can be processed.

All applicants for health programs must attain the established minimum placement test scores determined by their department of interest. All placement test scores, including those from other sources, must be less than three years old.

Certain health programs require completion of educational experiences in clinical/lab facilities. These clinical/lab facilities may require students **to undergo criminal background checks and/or drug testing**. If a student is excluded from clinical/lab facilities as a result of a background check and/or drug testing, the student may be asked to withdraw from the program. Some facilities may also require additional vaccinations and/or health examinations.

Enrollment in certain programs is limited and admission is competitive. The admissions committee for each program will select the most academically qualified applicants. For more information regarding specific criteria, contact the Director of Health Services admissions for the program of interest.

Admission into any health program will be contingent upon receipt of a CVCC medical form documenting that the applicant possesses satisfactory physical and mental health. Facilities for providing health care services are not available on campus.

Effective Fall 2011, students may apply to no more than TWO health care programs at one time (a primary program and an alternate program) within the School of Health and Public Services.

SPECIAL ADMISSIONS REQUIREMENTS FOR EARLY CHILDHOOD EDUCATION PROGRAMS.

In addition to the general procedures to apply for admission to a curriculum program of study, applicants for the Early Childhood Education program must complete other procedures.

CVCC's Early Childhood Education program requires completion of educational experiences in childcare facilities and/or public school settings. These settings require students to undergo criminal background checks. If a student is excluded from an educational setting as a result of a background check, the student may be asked to withdraw from the program. Some settings may also require additional vaccinations and/or health examinations.

Admission into CVCC's Early Childhood Education program may be contingent upon receipt of a CVCC medical form documenting that the applicant possesses satisfactory physical and mental health. Facilities for providing health care services are not available on campus.

SPECIAL CREDIT STUDENTS.

Individuals may enroll in classes without pursuing a certificate, diploma, or degree. Persons enrolling under these circumstances are considered SPECIAL CREDIT STUDENTS. Placement tests may be required depending upon the student's educational background and the prerequisites/corequisites of the courses in which the student wishes to register. Special Credit Students are not eligible to receive federal/state financial aid and must meet all course prerequisites.

A military veteran can not receive Veterans Educational Assistance Benefits (G.I. Bill) as a special student.

TRANSFER STUDENTS.

Transfer students may be admitted provided they meet all admission requirements.

Catawba Valley Community College will accept credits from college/universities accredited by any one of the following six regional accrediting bodies authorized by the United States Department of Education:

New England Association of Schools and Colleges
Middle States Association of Colleges and Schools
North Central Association of Colleges and Schools
Northwest Association of Schools and Colleges
Southern Association of Colleges and Schools
Western Association of Schools and Colleges

Courses with grades of "C-" or better will be accepted provided such courses parallel the content of CVCC courses and are relevant to the student's program of study. Transfer students are notified about transfer credit to CVCC from other institutions via student e-mail. Transfer credit is awarded only for those courses that apply to the student's program of study.

Grades for transferred courses are not included in a student's GPA at CVCC, although the credit hours are applied toward graduation. See also Residency Requirements for graduation.

INTERNATIONAL STUDENTS.

CVCC is authorized by the U.S. Department of Naturalization and Immigration to admit international students with a valid F-1 Visa or valid Permanent Resident Card. Work authorization cards are not permanent resident cards. The following items are required for admission and must be submitted as a complete package by the published deadline on the CVCC website (www.cvcc.edu):

1. a completed application for admission, 2. all financial statements as outlined on the CVCC website, 3. official transcripts from high school and secondary schools translated and evaluated by any agency associated with NACES, 4. a photograph, 5. verification of home country address, 6. an official TOEFL (Test of English as a Foreign Language) test score less than five (5) years old, and 7. a VISA clearance form if student is transferring from another United States institution of higher learning. Upon receipt of and verification of ALL application materials, a Certificate of Eligibility (I-20) may be prepared and issued to the student. International students may need to take placement tests administered at the CVCC Testing Center and are charged the applicable out of state tuition rates.

AUDITING STUDENT.

Students may attempt a course as an audit student one time. Students may not audit a class for which they have received credit unless justified by a clear benefit connected to a current program of study at CVCC. A change from an auditing status to a credit status (or vice versa) on or after the start date of the class must be approved by the instructor of the class and the Executive Officer of Student Services.

Students wishing to audit a course must satisfy all requisite requirements for the course just as do students taking a course for credit.

Students who audit a course will not receive a grade (other than AU) or credit for the course. Credit will not be granted under advanced placement procedures after enrolling in a course as an audit student. Tuition and fees for auditing a course are the same as those for enrolling in a course for credit.

Students who audit are required to comply with class attendance policies, complete assignments, and participate in class activities. They are not required to take examinations unless specified by the academic department.

Students should be aware that audited credit hours do not qualify for federal financial aid, VA benefits, and certain other grants and/or scholarships.

FEES, SCHOLARSHIPS, AND FINANCIAL AID

CVCC charges tuition in accordance with policies established by the North Carolina Community College System. Tuition rates are subject to change. Certain fees have been established in accordance with guidelines and ranges established by the North Carolina Community College System. Fees are subject to change. Due dates for tuition and fees are established by the Chief Financial Officer or designee. Students may forfeit their seat in a class if they fail to pay the applicable tuition/fees by the established due date.

TUITION (Subject to change depending on action of General Assembly.)

Tuition Per Semester:

North Carolina Residents
16 hrs. or more $1,104.00
15 hrs. or less (per semester hr.) $69.00
Out-of-State Residents
16 hrs. or more $4,176.00
15 hrs. or less (per semester hr.) $261.00

Determinations of **North Carolina Residency** for tuition purposes are made by the Executive Officer of Student Services or designee in accordance with laws and regulations established by the North Carolina General Assembly. North Carolina residency is not a factor in the tuition charged for non-credit courses. A student initially classified as an out-of-state resident for tuition purposes may request a change of residency classification upon meeting the "resident for tuition purposes" requirements. Detailed information regarding residency requirements and procedures for requesting a change in residency classification is available in Student Services.

It is the student's responsibility, whether classified as a resident or non-resident, to report any information to Student Services which may indicate a need for reclassification.

Tuition for students enrolling in Occupational Extension courses vary per course. However, fees may be established for self-supporting seminars and courses according to the schedule below in which more than normal expenses to the College are incurred. Such charges may cover the cost of instructional materials and/or textbooks required in such classes.

Continuing Education Occupational Extension (per course)
0-24 hours $65.00
25-50 hours $120.00
50+ hours $175.00

Students who take an Occupational Extension course more than twice within a five-year period; unless required for certification, recertification, or licensure; are required to pay a different formula rate per contact hour.

FEES AND INSURANCE

Student Activity Fee
7 or more credit hours $32.00
Less than 7 credit hours (per semester hour) $5.00
Student Accident Insurance (per semester)..................$1.25
Computer Use and Technology Fee
(Curriculum Students per semester).........................$10.00
Computer Use and Technology Fee
(Continuing Education Students per designated
technology-related course).......................................$5.00
Graduation Fee..$15.00
Certificate Fee $10.00
Liability/Malpractice
(ADN, Surgical Technology, Respiratory Therapy, EMS, Dental Hygiene, Polysomnography, and
Electroneurodiagnostic Students) $27.50
Liability/Malpractice (CNA and Phlebotomy Students).............$14.50
Service Charge for Returned Checks.........................$25.00
Lab Fees ....TBA
Replacement Fee for Library/Data Card....................$10.00
Transcript Fee $5.00

• To view a copy of CVCC's Student Accident Insurance Brochure visit **(http://www.cvcc.edu/Student_Services/Business_Office/Tuition_Fees.cfm)**

Accident insurance must be purchased by students registering for curriculum classes. The premium must be paid at the time of registration at the beginning of each semester.

Students enrolled in certain health programs/courses are required to purchase liability/malpractice insurance. The premium for this insurance is paid once annually through the business office.

Certain fees have been approved for testing services. These include fees for Microsoft Office User Specialist (MOUS) certification testing, test proctoring for non-CVCC students, or other special circumstances.

FEE WAIVERS. In compliance with North Carolina Statutes and regulations of the North Carolina Community College System, tuition and fees may be waived under the following circumstances: (1) Tuition shall be waived for up to six hours of credit instruction and 1 class for non-credit instruction per academic semester for senior citizens (65 or older) that are legal residents of North Carolina; (2) no extension registration fee shall be charged of individuals enrolling in special extension training programs for emergency telecommunication personnel, fire department personnel, volunteer rescue and life saving personnel, local law enforcement officers, or members of auxiliaries of such groups, providing the individual is a member of the group for which training is being provided; and (5) no extension registration fee will be charged to patients of state alcoholic rehabilitation centers.

Students eligible for a waiver of tuition for credit courses must apply in writing for this waiver in the Business Office.

High School students taking college credit classes through the Career and College Promise program are exempt from applicable tuition. Applicable fees will be charged.

OTHER EXPENSES. The cost of books, supplies, and equipment varies from one program of study to another. Generally, such costs will range from $50.00 to $500.00 per semester.

COLLECTION NOTICE. The College reserves the right to use all means necessary to collect any outstanding balances. This may include but is not limited to the use of NC Set-off Debt.

OTHER ACTIONS REGARDING PAST DUE ACCOUNTS. All previously incurred expenses and accounts, including library and payments made to Nelnet (a third party company) for tuition, generally must be fully paid before a student may re-enter at the beginning of any semester and before transcript, diploma, or certificate will be furnished.

REFUNDS

CURRICULUM CLASSES. The College follows the refund policies established by the North Carolina Community College System. A copy of the current refund policies may be obtained from the Business Office. Specific guidelines and processes to ensure compliance with these policies shall be established by the Chief Financial Officer or designee. The following are specific guidelines which have been established in accordance with these policies. Refunds for less than $5.00 will not be made.

A full (100 %) tuition refund shall be made if the student officially withdraws prior to the start date of the class. Example – If the start date of the class as indicated on the student's schedule is September 1, the student must withdraw from that class on or before August 31 to receive a full (100%) tuition refund.

A 75% tuition refund shall be made if the student withdraws on or before the census date of the class. The census date for a class is the 10% point of the class.

No tuition refund shall be made if the student withdraws from a class after the census date of that class. The census date for a class is the 10% point of the class.

The student fees, accident insurance premium, and some program specific fees (i.e., mal-practice insurance fees, processing fees, etc.) are not refundable unless the student officially withdraws prior to the start of his/her classes, a student's class is cancelled, or the College determines an institutional error has occurred.

WORKFORCE DEVELOPMENT (CONTINUING EDUCATION CLASSES). This policy includes occupational extension classes. A full refund will be given if the student officially withdraws from class prior to the first class meeting. Allow a minimum of two (2) weeks for processing of refund requests. Refunds for less than $5.00 will not be made. After the class begins, a 75% refund of registration only will be made if the student officially withdraws from the class prior to or on the 10% point of scheduled hours.

FINANCIAL AID

Students who wish to enroll but face financial difficulties are encouraged to apply for assistance through the Financial Aid Office. Financial assistance for educational expenses may be available in the form of grants, scholarships, loans, or work programs. Financial need is determined through analysis of an application completed by the student and parents. To apply for aid, the student must complete the Free Application for Federal Student Aid (FAFSA) available at www.fafsa.gov., and submit an official high school transcript or GED, official transcripts from all colleges previously attended and placement test scores if applicable. Financial assistance is granted on a yearly basis. Students must be accepted in an approved curriculum program and demonstrate satisfactory academic progress to be eligible for financial aid. Students are encouraged to apply by deadline dates located on the CVCC website.

A student must have a high school diploma or a General Education Development (GED) certificate before receiving any federal aid. The major student financial aid programs require that the student: (a) have financial need, except for some loan programs, (b) have a high school diploma or GED, (c) be enrolled as a regular student working toward a degree, diploma, or certificate in an eligible program, (d) be a U.S. Citizen or eligible noncitizen, (e) have a valid Social Security Number, (f) make satisfactory academic progress, and (g) register with the Selective Service, if required.

The satisfactory progress standards for Financial Aid are available for reference on the cvcc website (www.cvcc.edu) under the Admissions link and are available upon request to Student Services.

I. FEDERAL AID PROGRAMS

FEDERAL PELL GRANT. This grant is a source of federal student financial aid which provides eligible students with a "floor" of financial aid to help defray the cost of postsecondary education. Student eligibility is primarily based on financial need.

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT. This is a federal grant which is a "supplement" to the Pell Grant for students demonstrating the greatest financial need.

FEDERAL WORK STUDY. This federal program provides jobs at the College for students who have financial need. The number of hours worked is based on financial need and on how the combination of work and study hours will affect the student's academic progress.

VA EDUCATIONAL BENEFITS. Special needs and information about policies and procedures for veteran students and dependents using VA benefits are provided by the Veteran Certifying Officials in Student Services, and the local county VA offices. Students desiring to use VA Educational benefits should contact Student Services for CVCC program information and admissions requirements. Students must be accepted in a VA approved program of study and meet all institutional and VA requirements before certification can be made to the Veterans Administration. The specific application for benefits can be made on line at www.gibill.va.gov or with a VA Certifying Official in Student Services. Additional information regarding benefits, eligibility, policies, and procedures may be obtained from these offices. (See Veterans Affairs page 19.)

DIRECT LOAN PROGRAM

A. SUBSIDIZED LOAN. This type of loan is awarded on the basis of financial need. The federal government pays the interest on the loan ("subsidizes" the loan) until repayment begins and during authorized periods of deferment.

B. UNSUBSIDIZED LOAN. This type of loan is not awarded on the basis of need. Interest will be charged from the time the loan is disbursed until it is paid in full. A student must be an independent undergraduate or a dependent student whose parents are unable to get a PLUS loan.

C. PLUS LOAN. This type of loan is for the parent of a student who qualifies as a dependent student. The parent does not have to demonstrate "need" but must not have an adverse credit history.

II. STATE SUPPORTED AID PROGRAMS

NORTH CAROLINA COMMUNITY COLLEGE GRANT. This is a need based grant established by the NC Legislature to provide funds to help meet the educational costs of NC residents attending community colleges. To apply, the student must complete the Free Application for Federal Student Aid (FAFSA). Eligibility is based on the student being a NC resident, enrolled at least half time in an eligible curriculum program, maintaining satisfactory progress, meeting the Pell Grant eligibility requirements, and demonstrating financial need. Possible recipients are selected by the College Foundation of North Carolina, with each community college certifying that the student meets all eligibility requirements.

NORTH CAROLINA EDUCATION LOTTERY SCHOLARSHIP. The Education Lottery Scholarship was created by the 2005 General Assembly to provide financial assistance to needy North Carolina residents. To apply, the student must complete the FAFSA. Eligibility is based on the student being a NC resident, enrolled at least half time in an eligible curriculum program, maintaining satisfactory progress, meeting the Federal Pell Grant requirements, and demonstrating financial need. Possible recipients are selected by College Foundation of North Carolina, with each community college certifying that the student meets all eligibility requirements.

WELLS FARGO TECHNICAL SCHOLARSHIP. Through a grant to the North Carolina Department of Community Colleges by Wells Fargo Bank, one scholarship is available annually to students in the second year of a two-year technical program. Selection is based upon need and scholastic performance during the first year of studies.

STATE EMPLOYEE CREDIT UNION FOUNDATION SCHOLARSHIP. The SECU Foundation established this two year scholarship program to assist North Carolina Community College students achieve academic success. Preference will be given to students whose parents or guardians and family members are public sector employees who live and work in North Carolina. To apply, students must have completed the FAFSA. In addition, the student must be full time, a U.S. citizen, have demonstrated leadership and excellence of character, and maintain a 2.5 or higher GPA. Scholarship amounts are $5,000 per year. Recipients are selected by the Financial Aid Office. Information for the scholarship is available through the CVCC Financial Aid Office.

VETERANS' CHILDREN SCHOLARSHIP. Children of certain veterans who were either killed in action, disabled while in the armed forces, a prisoner of war or missing in action for a certain period of time may be entitled to financial aid from the North Carolina Division of Veterans Affairs to attend CVCC. Students may apply through the local N.C. Division of Veterans Affairs Office.

VOCATIONAL REHABILITATION AID. By action of the United States Congress, any physically handicapped student may be eligible for financial aid and for scholarship assistance. If a prospective student has any physical limitations, the nearest office of the North Carolina Department of Vocational Rehabilitation should be contacted. If the student prefers, the CVCC Financial Aid Office may be contacted.

OTHER AID. In addition to the above programs, various companies and civic organizations provide scholarships to deserving students.

III. SATISFACTORY ACADEMIC PROGRESS STANDARDS FOR FINANCIAL AID

Satisfactory Academic Progress (SAP) is a set of standards for financial aid progress to insure that all students receiving federal (Title IV) or state aid are making progress toward completion of a degree. The policy requires the measurement of satisfactory academic progress to include all periods of enrollment at the institution, including those periods for which the student did not receive any financial aid.

New federal regulations effective July 1, 2011, affect Satisfactory Academic Progress policies and procedures. The rules limit the length of time that students not making progress can continue to receive Title IV aid and require a more structured, comprehensive, and consistent approach to the development and implementation of institutional financial aid satisfactory academic progress policies.

PURPOSE, PROCEDURES, MONITORING, WARNING & SUSPENSION, APPEALS

PURPOSE

Institutions of higher education are required by federal regulations to establish minimum standards of satisfactory academic progress for students receiving financial aid. It is the expectation that students are to achieve minimum levels of progress toward completion of a degree. The progress is measured both qualitatively and quantitatively. The maximum timeframe for an academic program is divided into increments to ensure that the student is making sufficient progress toward completion of the degree. The institution will determine at the end of each increment (semester) if the student has completed a minimum of percentage of work toward completion of the degree. All semesters attempted at the institution will calculate in this determination, regardless of whether or not the student has received financial aid in the past. The Standards will apply to all students applying for or receiving federal or state aid.

The student is responsible for understanding the policy regarding Satisfactory Academic Progress and for being in compliance. The student is also responsible for understanding the consequences for noncompliance.

PROCEDURES
To be eligible for financial aid, students must meet the following minimum guidelines:

QUALITATIVE STANDARD - The student must maintain a minimum cumulative GPA of 2.00. Grades for developmental courses are not included in the semester GPA or cumulative GPA.

QUANTITATIVE STANDARD - The student must complete 67% (two-thirds) of all credit hours attempted from the beginning date of enrollment at the college. Developmental course hours are included in this measurement. Cumulative credit hours attempted will include all hours for which the student was enrolled as of the census date of the class (10% point of the class). Credit hours otherwise marked as forgiven under the previous Academic Forgiveness policy are included in hours attempted and hours completed if appropriate based on the grades received. Transfer credit hours that are accepted toward the student's educational program will count as both attempted and completed hours

MAXIMUM TIME FRAME - The student must successfully complete the program of study within the maximum timeframe. Federal regulations specify that the timeframe may not exceed 150% of the published length of the program as measured in credit hours. (If the academic program length is 65 hours the maximum timeframe for the program cannot exceed 97 credit hours attempted). Credit hours for developmental courses required by placement testing will be excluded (up to 30 credit hours) from the 150% calculation of hours. Transfer credits accepted from other schools that apply toward the student's program of study are included in the maximum timeframe.

MONITORING

The Financial Aid Office will monitor satisfactory academic progress for all students receiving or applying for federal or state aid to ensure that they are making progress toward program completion. The progress for all students receiving federal or state aid will be reviewed at the end of each semester. **Students will be notified by email regarding the status.** Failure to receive notification will not change the student's status. Not enrolling for one or more terms does not change the student's status.

CUMULATIVE CREDIT HOURS ATTEMPTED Cumulative credit hours attempted are defined as all credit hours attempted at CVCC, and all credit hours transferred from other institutions. Attempted credits include courses with grades of A, B, C, D, F, or P (pass). Credit hours for which a grade of WP (withdraw passing), WF (withdraw failing), CS (continued study), or I (incomplete) or R (repeat) count as attempted hours.

REPEATED COURSES - will be counted as hours attempted, hours completed, and also toward maximum credits allowable for each type of program for financial aid. Only one repetition of a previously passed course may be counted in the enrollment status. A course that has not been passed may count in the enrollment status until the course has been successfully completed.

CUMULATIVE CREDIT HOURS COMPLETED - Credit hours successfully completed are defined as grades of A, B, C, D or P (pass). Credit hours with a grade of F, WP, WF, CS, I, or R do not count as successfully completed credit hours.

AUDITED COURSES - Credit hours taken for a grade of "audit" do not apply toward a degree program. The grade of "audit" is not included in determining status for financial aid and does not count in the calculation of satisfactory academic progress.

INCOMPLETE GRADES - Courses with grades of "I" (Incomplete) will be considered as credit hours attempted and not completed. Students who have made arrangements with the instructor to complete required course work are not required to re-register for the same class during a subsequent semester to complete the work. If the "incomplete" grade resulted in a student being placed on financial aid probation or suspension, once completed, the student must notify the Financial Aid Office to have progress reevaluated.

CUMULATIVE GRADE POINT AVERAGE - The minimum cumulative GPA for graduation at CVCC is 2.00. The student receiving financial aid must meet the minimum standard of the school.

COURSE WITHDRAWALS - Any student who withdraws from a class, either officially or unofficially should know how the withdrawal could affect the eligibility for financial aid as determined by the Satisfactory Academic Progress Standards. A withdrawal will count as attempted, but not completed credit hours. A grade of WP will affect the quantitative measure, but not the qualitative measure, as it will not count in the GPA calculation. A grade of WF will affect both the quantitative and qualitative measure, as it will count in the GPA. Financial Aid recipients should discuss the consequences of withdrawing from a class with the Financial Aid Office before doing so.

DEVELOPMENTAL COURSES - Federal regulations allow financial aid recipients to take a maximum of 30 credit hours of developmental coursework. Developmental courses are included in the calculation of satisfactory progress in the quantitative measure (hours attempted versus completed). The grade received for the developmental class, however, is not included in the GPA. To remain in good standing, students enrolled in developmental courses must receive grades of A, B, or C, or P.

TRANSFER STUDENTS - All transfer credit hours granted to the student will be included in the measurement of maximum timeframe. Transfer credit hours that are accepted toward the student's educational program will count as both attempted and completed hours.

CHANGE OF MAJORS - Students who change majors without graduating from a program will assume the timeframe of the new major and all hours previously attempted will count toward the maximum timeframe of the new major. Frequent changing of programs without graduating could result in the loss of federal or state eligibility. If a student graduates from a program of study and desires to pursue another program, the student will assume the maximum timeframe of the new program less any attempted hours related to courses not required in the program previously completed. A student is allowed to receive financial aid for the completion of only two academic programs.

DOUBLE MAJORS - Students who choose to double major (pursue multiple programs at the same time) will assume the maximum timeframe of only one academic program.

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

ENROLLMENT STATUS - Full time (12 credit hours or more), 3/4 time (9-11 credit hours), 1/2 time (6-8 credit hours), less than 1/2 time (less than 6 credit hours)

WARNING AND SUSPENSION

Warning - The minimum credit hour completion requirement (quantitative measure) and the minimum GPA academic standards (qualitative measure) are assessed at the end of each term. **If a student does not have a 2.0 cumulative grade point average (GPA) AND pass at least 67% of the credit hours on a cumulative basis, the student is placed on WARNING for the next term attended.** (Remember this calculation is done on all classes attempted from the beginning date of enrollment at CVCC). The student will be notified by email at the end of the semester if he/she is in the **WARNING** status. Financial aid may be received during this **WARNING** term.

For students in clock hour programs, the review of progress will be done at the point the scheduled clock hours for that payment period are successfully completed. In order for the student to be eligible for the next payment period, the student must have successfully completed both the clock hours and the weeks of instructional time for the required period.

SUSPENSION - At the end of the WARNING period, students whose term completion rate and GPA do not meet SAP standards (67% completion of all hours attempted and a 2.0 cumulative GPA) will be on SUSPENSION. Students who are suspended will no longer be eligible to receive financial aid. At this time, the student must pay for college expenses each semester until the SAP standards are met or submit an Appeal if documentation can be provided to indicate extenuating circumstances that impacted academic performance.

AFTER SUSPENSION - Other than when an Appeal is granted, a student can reestablish eligibility of financial aid only by taking action that brings the student in compliance with the qualitative and quantitative components of the Satisfactory Academic Progress Policy, including the maximum timeframe. It may be in the best interest of the student to consider taking fewer credit hours, which will allow the student to focus on achieving a higher GPA and completion rate. The student may, at any time, request to have eligibility reevaluated by the Financial Aid Office.

It is the student's responsibility to be aware of the Satisfactory Academic Progress Standards for financial aid eligibility. When placed on **Warning** or **Suspension, the student is notified by the CVCC email account.** If the necessary action is taken by the student to bring the student back in compliance with the qualitative and quantitative components of the Standards, financial aid (depending on the availability of funds) is reinstated at the beginning of the next term of attendance, if otherwise eligible.

APPEALS

SAP APPEALS - A student may appeal the Suspension of financial aid by obtaining a **Satisfactory Progress Appeal Request** form online at www.cvcc.edu and indicating in writing: a) reasons why he or she did not achieve minimum standards, b) reasons why his or her eligibility should not be terminated, but reinstated. Appeals must be submitted in writing with supporting documentation explaining any unusual circumstances that caused the student's academic progress to be less than required. Federal regulations give some examples where allowances might be made for mitigating circumstances. Mitigating circumstances are defined as (1) death of a relative of the student, (2) an injury or illness of the student, (3) other special circumstances causing undue hardship to the student and beyond reasonable control of the student. An **Appeal** cannot be based on the student's lack of knowledge regarding the policy or simply the need for financial aid. An **Appeal** will be automatically rejected if no documentation is provided.

A student suspended for exceeding the maximum hours allowed for degree completion should complete the **Financial Aid Satisfactory Progress Appeal Request** form and have an academic advisor submit in writing the remaining hours required for degree completion if extenuating circumstances require the student to exceed the maximum hours limit.

The **Financial Aid Satisfactory Progress Appeal Request** form should be submitted to the Director of Financial Aid by the first day of the next semester of enrollment, to ensure a timely decision as it relates to payment of tuition and books. Once the **Financial Aid Satisfactory Progress Appeal Request** is received, the Director may have 14 days from the beginning of the current semester date to make an eligibility determination.

Students on financial aid **Suspension** who are seeking to regain eligibility for financial aid through the **Appeal** process will remain ineligible for assistance until the **Appeal** process is completed and an affirmative decision has been made. Students on financial aid **Suspension** should not depend on financial aid to pay for costs of registration, but should be prepared to pay from their own resources pending the outcome of their financial aid **Appeal**. The student will be reimbursed if the **Appeal** is approved.

Probation on Appeal - If an **Appeal** is approved, the student will be placed on **Probation by Appeal**. This status will hold the student to a higher term-based standard for SAP evaluation. **Probation on Appeal students must earn a minimum term-based GPA of 2.50 (or equivalent if course is repeated) and complete 100% of hours attempted for the term.** Those meeting the standard will continue in this status until they regain full satisfactory SAP status (67% completion and 2.0 cumulative GPA). Failure to meet the **Probation on Appeal** conditions each semester will result in **Suspension** of aid. Students may want to consider reducing the number of attempted hours per semester in order to maintain satisfactory progress.

Appealing the 150% Timeframe Rule - Students who wish to appeal the 150% timeframe rule are required to complete the Financial Aid Satisfactory Progress Appeal Request form and have an academic advisor complete the Academic Plan form to determine how many courses remain toward graduation. The advisor must provide the student with an educational plan that will allow the student to complete the degree. The student must successfully complete 100% of everything attempted from that point forward to complete the degree (no withdrawals, no incompletes, and no grades lower than a C). If the student fails in these requirements, the aid will be permanently suspended.

It is your responsibility to understand this policy. If, at any time, you have questions regarding the policy, please see the Financial Aid Office.

IV. LOCAL SCHOLARSHIPS AND FINANCIAL AID

A. CVCC FOUNDATION SCHOLARSHIPS

The Catawba Valley Community College Foundation, Inc., is a nonprofit organization that provides the community a vehicle through which investments may be made in the education of CVCC students through scholarship funds. These scholarship funds provide an opportunity for each student to compete for funds to pay for his/her education. Scholarships are provided through tax-deductible gifts from individuals, businesses, community organizations, and CVCC alumni. All CVCC students are invited to submit a scholarship application. One scholarship application initiates the application/eligibility process for all Foundation scholarships. When the CVCC student enrollment form is activated, an invitation to apply for a CVCC Foundation Scholarship is sent via the email address or home address found on the enrollment form. The CVCC Foundation Scholarship selection is a continuous process. Each student is encouraged to return the scholarship application as soon as possible for access to the scholarship process.

STUDENT LIFE

STUDENT SERVICES

Student Services provides entry, support, and transition services to curriculum students. A definitive program of services is offered to assist a student in satisfactorily selecting, entering, progressing within, and completing a program of study. In addition, a student is provided with numerous opportunities for personal development and social growth through a variety of planned activities.

ACADEMIC ADVISING. Each curriculum student enrolled in a degree, diploma or certificate program will have access to academic advising through an assigned advisor or through the Advising Center. This determination is made during the Admissions interview and will be communicated to the student as appropriate for the program of study. The purpose of academic advising is to assist the student with planning a course schedule, registration, program sequence and completion, graduation review, and general academic advising.

ADVISING CENTER. The Center is currently located in the lower level of the Student Services Building. Hours are posted at the Center. The phone number is (828) 327-7000, ext. 4687.

CAREER SERVICES. (828) 327-7000, ext. 4690.

CAREER COUNSELING. Individual career counseling is available to all students who are interested in discussing their career interests, choice of program, and career goals. Career assessments and career reference information are used to assists students in examining their interests, values, and skills to explore career options. Assessments available include: Self Directed Search, Myers-Briggs Personality Type Indicator, E-Discover, and Bridges Career Planning Tools.

JOB PLACEMENT. Students have access to jobs listed by employers who call the Career Services Office for assistance. The office has listings for full-time, part-time and temporary jobs. Current students, former students, and graduates of curriculum programs are eligible for placement services. Other services available include: personal assistance with resume preparation, forwarding resumes, job fairs, workshops, and on-campus interviews.

COOPERATIVE EDUCATION. Co-op is a curriculum (credit) course that can provide on-the-job work experience for students enrolled in eligible programs. Students work in jobs related to their program of study and receive course credit for the learning that takes place on the job. Not all programs have Co-op as an option and there are requirements that students must meet prior to enrolling in a Co-op course. Co-op options for eligible programs are listed in each program of study. Interested students may contact their advisor or Career Services.

COMMUNITY CONNECTIONS. Getting an education is more than just gaining textbook knowledge. It's about exploring the world . . . and yourself. At CVCC, we've developed a one-of-a-kind bundle of student privileges called "Community Connections" that enriches your mind and your body. From a partnership with the affiliates of the United Art Council to a free YMCA membership, students receive the benefits of a diverse, all-encompassing education. For more information, contact the Office of Student and Community Engagement at 828-327-7000, ext. 4130.

COUNSELING. Counselors are available to assist students in solving academic and vocational problems. If at any point, the counselor or student determines that the student's ability to benefit from campus services is limited, the counselor will recommend appropriate resources and suggest these alternatives to the student.

E-MAIL ACCOUNTS. All students are assigned a CVCC email address within 5 business days of their meeting with Admissions. Students are expected to read their email daily as the college shares valuable information with students regarding financial aid awarding, registration, campus safety alerts and general news.

FINANCIAL ASSISTANCE SERVICES. Consistent with the open door admissions policy, it is the intent of the college administration that no person be denied the opportunity to pursue financial assistance. Therefore, scholarship and financial assistance information is available during the admissions counseling process. The Director of Scholarships and Financial Aid is available to assist students and potential students in planning for the financial support of their education.

GED TESTING. The High School Equivalency GED (General Educational Development) tests are administered on a regularly scheduled basis. Contact the Testing Center at 828-327-7000 ext. 4260 for the GED testing schedule.

HEALTH SERVICES/INFORMATION. No formal health care program for students is provided. However, the Student Government Association shall include in its annual program planning various health related activities. These may include presentations by college personnel or outside health care agencies on substance abuse, HIV, wellness, nutrition, or other vital health care topics. Any student, faculty or staff health related emergencies are referred to area health care agencies. CVCC has developed a policy designed to protect all employees and students in the workplace from exposure to bloodborne pathogens. A copy of the policy is on file in the office of the Executive Officer of Student Services.

HOUSING. Catawba Valley Community College primarily serves students within commuting distance of the campus. CVCC has no dormitory or housing facilities.

NEW CHOICES: STRATEGIES FOR SUCCESS. This program is designed to assist displaced homemakers in the Catawba Valley. If an individual has recently experienced the death or disability of a spouse, separation or divorce, layoff or long-term unemployment of a spouse, New Choices may be able to help. Potential participants are individuals who have worked mainly without pay to care for home and family, have few job skills, and are unemployed or having trouble finding a better job. Services may include career exploration, job preparation (resume writing, interviewing skills), job search, financial assistance with education (tuition/fees, books/supplies, transportation, child care), goal setting, information/referral, workshops/seminars, and moral support. For more information, call 828-327-7000, ext. 4408.

ORIENTATION-Preview: New Student Orientation & Registration is required of all new students. Upon completion individuals will be allowed to register for courses. Preview is offered prior to the Fall and Spring semesters. This one-day orientation introduces individuals to information students will need to navigate on campus, explore career options, and register for upcoming courses. Participants will also be instructed on how to access on-line classes, student accounts, grade information, and payment options through CVCC's student software.

PROGRAM FOR STUDENTS WITH DISABILITIES. A program of services is provided for students with disabilities. Individuals with disabilities (as defined in the Americans with Disabilities Act of 1990) wishing to make a request for reasonable accommodation or wishing to file a complaint of alleged discrimination on the basis of disability should contact the Counselor for the Program for Students with Disabilities by phone at 828-327-7000, extension 4222 or by mail at 2550 Highway 70 SE, Hickory, NC 28602. It is the student's responsibility to request these services. Current documentation of the disability by an appropriate professional will be required. All information is kept confidential. Students will be required to sign a release of information form before any special contact is made to arrange accommodations. Requests for reasonable accommodation should be made several weeks in advance to allow sufficient time for accommodations to be arranged.

STUDENT RESOURCE GUIDE 2013/2014
College policies and procedures are applicable to all students enrolled at CVCC, whether part time, full time, auditing, special credit, or non-credit. These policies and procedures are outlined on our web sites at http://www.cvcc.edu/About_Us/Policies/ and http://www.cvcc.edu/About_Us/Procedures/. Please contact the Executive Officer of Student Services if you have questions about college policies or procedures. Information contained in this document is subject to change without notice. CVCC is an equal opportunity/affirmative action institution.

SPECIAL PROGRAMS. Students needing assistance with childcare funding or other supportive services such as temporary funding of tuition, books, supplies or transportation should contact the Director for Special Programs in the Learning Assistance Center (LAC). Each year special grant applications are made, and there may be funds for financial assistance. Applications are available in the Learning Assistance Center (LAC) and Student Services and are distributed to the "most in need" as long as funds last. "Most in need" is determined by information submitted on the Free Application for Federal Student Aid (FAFSA).

TESTING SERVICES. Students applying for degree, diploma, and certificate programs may be required to complete certain placement tests. CVCC utilizes the COMPASS testing program developed by American College Testing (ACT) to assess reading, writing, and numerical/algebra skills. The OPAC software program is utilized to assess computer literacy skills. Test results are used by academic advisors to place students in appropriate courses and thereby maximize their opportunities for success. Placement test scores are not used for determining admission to the College, but may be required to satisfy certain program of study requirements. Students are provided appropriate information on placement testing including the placement testing schedule during the admissions process. COMPASS and (ASSET) test scores are valid for a period of three years. If the test scores expire before required courses are taken, then the student must retest.

RE-TESTING GUIDELINES. Students enrolled in developmental courses at CVCC have the opportunity to demonstrate academic competencies on pre-tests and/or post-tests in the course. Therefore, re-testing on the college placement test is generally not considered productive.

A placement test may <u>not</u> be retaken except as follows: The original test score is believed to be invalid due to illness, interruption, or other problems during test administration as determined by the Testing Services staff or the appropriate dean.

Students may retest if original test scores have expired. Students may re-test once per academic year if evidence of instructional intervention in the academic competency to be re-tested is provided.

The student may re-test after completing a <u>pre-approved plan</u> for alternative remediation. The alternative remediation plan must consist of a minimum of 80 hours or the equivalent to 80 hours of appropriate study under the tutelage of an instructor with a Bachelor's degree in English, Reading, or Math. Plan objectives, syllabus, and assessment procedures must be submitted to the appropriate Department Head when the student applies for permission to complete remediation. In the case of Early College High School (ECHS) students, the principal of the ECHS will submit the plan for all ECHS students wishing to pursue alternative remediation for a particular semester.

Alternative remediation plans must be pre-approved by the appropriate person listed below:
English and Reading - Department Head, Humanities
Math - Department Head, Mathematics

A re-test is authorized by the mathematics department head, the humanities department head, or the Dean. These individuals will submit a re-testing referral form to the Testing Services staff to authorize a re-test.

The Testing Center also offers entrance exams for health programs, proctoring services, GED testing and CLEP.

VETERANS AFFAIRS. Special needs and information about policies and procedures for veteran students and dependents using VA benefits are provided by the Veteran Certifying Officials in Student Services, and the local county VA offices. Students desiring to use VA Educational benefits should come to Student Services for CVCC program information and admissions requirements. Students must be accepted in a VA approved program of study and meet all institutional and VA requirements before certification can be made to the Veterans Administration. The specific application for benefits can be made on line at <u>www.gibill.va.gov</u>. Additional information regarding benefits, eligibility, policies, and procedures may be obtained from these offices.

VA students are responsible for the payment of all tuition, fees, and books at registration. VA payments are made directly to the student after classes have begun, and may take sixty days or more for initial enrollment.

• V.A. benefits will reimburse only the courses required in one specific program of study.

The Veteran Certifying Officials in Student Services are responsible for (1) maintaining the appropriate records regarding veteran enrollment and progress within an educational program, and (2) notifying the Veterans Administration of any change affecting the recipients enrollment status. Students receiving VA benefits must immediately notify the VA representative in Student Services of any change in their status to include dropping or adding classes, program changes, or new names and addresses. CVCC Student Services representatives are NOT employees of the Veterans Administration and are not responsible for VA policies, rules, or public laws which determine eligibility or payments. This includes, but is not limited to, the requirement that only required classes which specifically meet a graduation requirement for the approved program can be certified to the VA for the payment of benefits. Failure to comply with requests for documentation from the VA Certifying official(s) at CVCC may result in processing delays for benefits. Students using VA benefits must comply with all college satisfactory academic process guidelines and remain in good academic standing to continue receiving benefits. For additional information see the VA web page at: http://www.cvcc.edu/stud_serv/FinancialAid/va.htm.

HOURS OF CLASSES

Students may attend Catawba Valley Community College on either a full-time or part-time basis. Day classes are normally scheduled between 8:00 a.m. and 5:00 p.m., Monday through Friday. Evening classes are normally scheduled between 5:00 p.m. and 10:00 p.m., Monday through Thursday. Some classes are also scheduled on weekends, Friday evening and Saturday daytime.

STUDENT CENTER

The Student Center, a place to meet and eat, is one of the focal points of campus social life. A cafeteria-style snack bar, dining area, outdoor patio, and television help fill leisure moments and relieve study pressures. The Student Center is also available to provide a relatively quiet but relaxed atmosphere in which students may constructively use time for academic preparation.

TROVE COLLEGE STORE (Bookstore)

The College operates a well-stocked, walk-in, self-service college store, the Trove, at which most required books, supplies, and tools are available. In addition, other items of student interest may be purchased. While operating primarily for the students, the Trove is open to the general public and is located in the Student Center.

LEARNING ASSISTANCE CENTER (LAC)

The Learning Assistance Center is an academic support center offering walk-in tutorial assistance to Catawba Valley Community College students who are experiencing academic difficulties or wanting to improve their academic performance. Individual assistance is available in all levels of mathematics, science, writing, and study skills. Computer-assisted instruction, video instruction and Internet access are also available.

In addition, students who are making grades of 80 or below or who are retaking a class are eligible for free tutorial help. Students interested in either using the Learning Assistance Center or receiving a tutor should contact the Learning Assistance Center for additional information.

Also available is the Peer Mentoring Program. The program is designed for new students who are nervous about going to college, need to learn or improve study skills, and/or need a little extra help and guidance. The Program provides academic and personal support to new students experiencing the challenges associated with the first semester college experience.

LIBRARY

The Library is located on the second floor of the Cuyler A. Dunbar Building. Its primary function is to support instruction and provide necessary resources to the students in each of the curricula areas. Library patrons consist of both students and the public. The Library has a capacity of 201 students with a collection of 30,000 volumes. Eight individual study rooms and two group study rooms are available for use.

STUDENT ACTIVITIES

CVCC encourages student co-curricular activities and student organizations that promote student growth. Organizations and activities shall be open to all students regardless of race, color, sex, religion, disability, or national origin.

STUDENT GOVERNMENT. Each curriculum student enrolled at CVCC is automatically a member of the Student Government Association (SGA). SGA is intended to be a vehicle through which students have input into CVCC decisions and into the general welfare of students. The goals of this organization are to encourage student-faculty cooperation; provide democratic action in school activities; coordinate student activities; and maintain high standards for the school by upholding high personal standards of conduct. The SGA President is a nonvoting member of the Board of Trustees.

All on and off campus fund-raising activities and other on-campus solicitation activities by students and/or student groups must be approved in advance in accordance with guidelines established by the President's Cabinet. Procedures for organizing student activities and for establishing student organizations shall be established by the Executive Officer of Student Services or designee. CVCC does not support campus organizations typically known as social fraternities and sororities.

Ambassadors for Christ provide regular chances to study and discuss the Bible, worship and pray in a group setting.
Advisor: Kenneth Mann, kmann@cvcc.edu, 327-7000 ext. 4495.

American Chemical Society's Student Affiliate Society of CVCC gives chemical science students practice in professional areas, including preparing and presenting technical material before chemical professionals.
Advisor: Kim Browning, kbrowning@cvcc.edu, 327-7000 ext. 4536.

Architectural Technology Club gives members a chance to network with practicing professionals through an annual portfolio day. Latest trends and developing technologies, including green building, will be a focus of club meetings. Members will volunteer with a local non-profit that can use their unique skills. Advisor: Lynn Preslar, lpreslar@cvcc.edu, 327-7000 ext. 4302.

ASIA: Asian Student International Association is a club of all nationalities to raise awareness of Hmong and other Asian issues.
Advisor: Betty Petersen, bpetersen@cvcc.edu, 327-7000 ext. 4441.

Association of Respiratory Therapy Students promotes professionalism in respiratory care students. Members are involved in promoting healthy lifestyles and providing assistance at an asthma camp for children. Advisor: Cathy Bitsche, cbitsche@cvcc.edu, 327-7000 ext. 4391 and Advisor: Robin Ross, rross@cvcc.edu, ext. 4462.

Automotive Systems Technology Club includes all automotive systems technology students. Members tour assembly plants, go to races and volunteer with many campus events.
Advisor: Shawn Mull, smull@cvcc.edu, 327-7000 ext. 4234.

Biology Club members promote community service, service learning and outdoor recreation. Activities include wetlands restoration, biodiversity surveys, and waterfall hikes. Advisors: Emily Whiteley, ewhiteley@cvcc.edu, 327-7000 ext. 4361, and Tracie Jefferies, tjeffries@cvcc.edu, 327-7000 ext. 4540

Bridge the Gaps provides a forum to address the issues caused by gender bias and to find ways of making changes to these inequalities through group research and community involvement.
Advisor: Betty Petersen, bpetersen@cvcc.edu, 327-7000 ext. 4441.

Business Leaders of Tomorrow provides out-of-the-classroom learning and experience to office administration, business, accounting and entrepreneurship students. Opportunities abound to build business and community relationships. Members are often able to attend conferences, seminars, and participate in educational trips. Advisor: Brenda DeLee, bdelee@cvcc.edu, 327-7000 ext. 4673 and Advisor: Selena Maxie, smaxie@cvcc.edu, ext. 4307.

Certifiable members work on campus computer projects and prepare for industry certifications. Advisor: Tonya Stephens, tstephens@cvcc.edu, 327-7000 ext. 4109.

Chess Club members get together to enjoy playing chess!
Advisor: Kenneth Mann, kmann@cvcc.edu, 327-7000 ext. 4495.

CKI (Circle K, affiliated with Kiwanis International) is the largest collegiate community service, leadership development and friendship organization in the world. Members work on campus and community service projects throughout the year. Advisor: Annis Shields, ashields@cvcc.edu, 327-7000 ext. 4458, and Krysten Buchanan, kbuchanan@cvcc.edu, 327-7000 ext.4691.

Collegiate Music Educators Club helps students become aware of employment in music education and performance. Members are exposed to professional learning opportunities in music and receive material about continuing music education at four-year institutions.
Advisor: Amalie Hinson, ahinson@cvcc.edu, 327-7000 ext. 4418.

Cosmetology Club (The Cutting Edge) fosters the development of skills necessary to become successful cosmetologists. Members have a variety of activities and field trips.
Advisor: Tammy Muller, tmuller@cvcc.edu, (828) 327-7000 ext. 4108.

CVANS gives nursing students an opportunity to complete service projects in the community. Advisor: Eleanor Bloomfield, ebloomfield@cvcc.edu, 327-7000 ext. 4335, and Robin Cladwell, rcaldwell@cvcc.edu, 327-7000, ext. 4299

CVCC CRU (Campus Crusade for Christ) is an international organization that seeks to develop tomorrow's leaders by embracing the purpose, love and forgiveness that God offers them in a relationship with Jesus Christ. Advisor: Ari Sigal, asigal@cvcc.edu, 327-7000 ext. 4355.

CVCC CyberWatch promotes the study and practice of computer forensics and information assurance. Members compete in the Mid-Atlantic Cyber Collegiate Cyber-Defense competition. Advisor: Tom Foss, tfoss@cvcc.edu, 327-7000 ext. 4794.

Debate Club provides members with a chance to learn the intricacies of formal debate. Advisor: Kenneth Mann, kmann@cvcc.edu, 327-7000 ext. 4495.

Electroneurodiagnostic Club members help market the END professions. Fundraising activities throughout the year mean club members can attend statewide seminars and workshops. Advisor: Eric Jarrett, ejarrett@cvcc.edu, 327-7000 ext. 4514.

Emergency Medical Science (EMS) Club gives members exposure to EMS activities not generally found in the classroom. The club actively promotes participation in the EMS curriculum as well as in college-wide activities. Advisor: Nimon Badgley, nbadgley@cvcc.edu, 327-7000 ext. 4347.

Entrepreneur Club fosters the use of entrepreneurial thinking and helps develop the skills necessary to become successful business owners or managers. Members have a variety of activities during the school year, including speakers' forums, field trips and special projects.
Advisor: Gary Muller, gmuller@cvcc.edu, 327-7000 ext. 4672.

Environmental Life Science Club promotes networking among ELS students through field trips and participation in contests.
Advisor: Darrell Kiser, dkiser@cvcc.edu, 327-7000 ext. 4238.

Geology Club provides students with access to field trips and research opportunities in geology and environmental science. Volunteering, community service and stewardship are all practiced by the club.
Advisor: Joanna Connolly, jconnolly@cvcc.edu, 327-7000 ext. 4534.

Information Systems Security Club keeps members current on the latest security issues and fixes, promotes the CVCC information security program to high schools and in the community, and provides a scholarship for a student in the curriculum program. Advisor: Rick Barnes, rbarnes@cvcc.edu, 327-7000 ext. 4312.

Minority Males on the Move encourages minority males to attend and graduate from CVCC. Members explore employment opportunities and seek to prepare minority males with the right college courses.
Advisor: Julian Larry, jlarry@cvcc.edu, 327-7000 ext. 4573.

Phi Theta Kappa is an international honor society that recognizes and encourages scholarship, leadership, service and fellowship. Membership invitations are extended to students who excel academically and in their service. Members participate in campus and community projects.
Advisor: Teresa Sumner, tsumner@cvcc.edu, 327-7000 ext. 4389.

Polysomnography Club members are often found participating in community events promoting improved health care and good sleep hygiene. They actively promote the "Polysom" program throughout the area to ensure a continued pipeline of quality applicants. Advisor: Sarah Hoffman, shoffman@cvcc.edu, 327-7000 ext. 4517.

Radiography Club promotes communication among radiography students. Members attend a conference each year where they network with radiography professionals.
Advisor: Bruce James, bjames@cvcc.edu, 327-7000 ext. 4132.

REFABS: Raising Expectations for All Black Students promotes awareness and dialogs on race. Members are frequently involved in campus and community service projects.
Advisor: Betty Petersen, bpetersen@cvcc.edu, 327-7000 ext. 4441.

Rotaract (affiliated with Rotary International) is a service club that gives members an opportunity to work on campus and community projects. Advisor: Teresa Biggs, tbiggs@cvcc.edu, 327-7000 ext. 4288; Advisor: Steve Hunt, shunt@cvcc.edu, ext. 4570; Advisor: Mary Beth Sjaardema, msjaardema@cvcc.edu, ext. 4282.

Seeds of Service (SOS) is a dynamic club that is active in tons of service activities on campus and in the community. The club annually sponsors the CVCC "Run of the Mill" 5k with proceeds going to local charities. Advisor: Staci Wilson, stwilson@cvcc.edu, 327-7000, ext. 4525; Advisor: Amy Bechtol, abechtol@cvcc.edu, ext.4377; Advisor: Amanda Crouse, acrouse@cvcc.edu, ext. 4365; Advisor: Aden Cranford, acranford@cvcc.edu, ext. 4575.

Skills USA unites students in industrial, technical, health occupations and vocational trades. Club members acquire leadership skills, learn about and promote high professional standards and share in establishing career goals. Advisor: Randy Caudill, rcaudill@cvcc.edu, 327-7000 ext. 4561.

Student American Dental Hygiene Association gives dental hygiene students a chance to volunteer for and participate in community events. Guest speakers regularly present lively topics. Club members attend statewide scientific meetings. Advisor: Debbie LeFevers, dlefever@cvcc.edu, 327-7000 ext. 4157 and Advisor: Connie Preiser, cpreiser@cvcc.edu , ext. 4440.

Student Government Association (SGA) sponsors activities open to all currently enrolled curriculum students. SGA activities promote cultural, social, physical, and academic growth. Programs sponsored include Fall and Spring Fling, N4C SGA conferences, co-curricular activities, volleyball and basketball, and much more! Advisor: Bo Glenn, bglenn@cvcc.edu, 327-7000 ext. 4388; Advisor: Debra Cook, dcook@cvcc.edu, ext. 4342; Advisor: Linda Lutz, llutz@cvcc.edu, ext. 4130; Advisor: Anne Williams, awilliams@cvcc.edu, ext. 4285.

Student Photographic Society is a chapter of the national group sponsored by Professional Photographers of America. The club is involved in loads of campus and community events photographing and displaying their works.
Advisor: Clayton Joe Young, jyoung@cvcc.edu, 327-7000 ext. 4467.

Surgical Technology Club members participate in campus blood drives, walk in community walk-a-thons and raise funds for surg tech "extras", like a very special pinning ceremony.
Advisor: Carol Harrison, charriso@cvcc.edu, 327-7000 ext. 4332.

Theater Arts Club gives all students a chance to be involved in theatrical events like dramatic readings, one-act plays and storytelling. Follow on Facebook: http://www.facebook.com/cvcctheatreartsclub.
Advisor: Kim Stinson, kstinson@cvcc.edu, 327-7000 ext. 4406.

CVCC FOUNDATION

The Catawba Valley Community College Foundation is an autonomous non-profit organization created to foster and promote growth, progress, and the general welfare of Catawba Valley Community College. Since its incorporation in July 1984, the CVCC Foundation Board of Directors and staff have worked to develop and extend private financial support to CVCC and its programs and services, and to aid the college in various other ways. One of the avenues of assistance being developed by the CVCC Foundation is a student-centered endowment that will provide funding for unrestricted scholarships, student support, professional development, academic support, and college environment enhancements.

VISITORS ON CAMPUS

VISITORS/CHILDREN ON CAMPUS/SOLICITORS/FREE SPEECH, PUBLIC ASSEMBLY, AND DISTRIBUTION/PETITIONING Visitors are defined as anyone other than CVCC personnel, officially enrolled students, members of the Board of Trustees, and members of the CVCC Foundation Board.

Visitors are permitted (and welcomed) on CVCC property for participation in or attendance at CVCC sponsored or approved activities/events and for use of the CVCC library facility.

Employers wishing to recruit on campus must coordinate their visit with the Director of Career Services or the Director of the Alexander Center for Education.

Media representatives are encouraged to inquire with the Public Information Officer prior to interviewing, photographing or videotaping employees or students on the various CVCC campuses. See also CVCC policy 4.2 (Authorized Spokesperson).

Visitors must comply with all other CVCC policies including the CVCC policy on free speech, public assembly, distribution/petitioning, and the CVCC policy on solicitation.

Visitors may be required to provide personal identification to CVCC officials or campus security. Visitors who do not comply with requests for identification, or who interfere with the normal operations, functions, or learning environment of CVCC, will be asked to leave. Individuals who refuse to leave will be considered trespassing and will be subject to arrest. CVCC shall not be held responsible for accidents or injuries to visitors who are in violation of CVCC policies.

CHILDREN ON CAMPUS

For the purposes of this policy, a child is defined as any youth under the age of 16 who is not officially registered in a CVCC class or Challenger High School class.

Children accompanying employees, students, or visitors of CVCC must be under the constant supervision of a responsible adult while on CVCC property, or on the site of any approved off-campus class or other CVCC event. Employees of CVCC have assigned duties and cannot take supervisory responsibility for any unattended children of employees, students, or visitors. Children should not be unattended in any CVCC facility at any time.

CVCC assumes no responsibility or liability for children, or for any accidents or injuries to children.

Students, faculty, and staff are expected to arrange for their personal childcare away from the work site. An employee must have the approval of his/her supervisor to bring a child to the workplace during working hours due to an emergency situation at home. Sick children should not be brought to campus.

Children accompanying employees, students, or visitors are not permitted in classes, labs, or other learning environments.

Persons receiving CVCC services may be refused service if accompanied by a child who will be unattended during the time the patron is receiving services, or if accompanied by a child who is disruptive to CVCC operations. CVCC personnel are not expected to provide supervision of such children.

If children are left unattended, CVCC may notify law enforcement personnel and/or the Department of Social Services.

SOLICITATION

For purposes of this policy, solicitation is an oral or written request/notice for, or effort to achieve, a contribution, a donation, or a sale/purchase of goods or services on any property owned, leased, or under the jurisdiction of CVCC.

Solicitation for commercial (for profit) purposes that is not a routine and necessary part of CVCC's normal operations, activities, or functions is restricted as to time, place, and manner and must be approved in accordance with procedures established by the President (or designee). Such solicitation may not utilize state property. Such solicitation must not interfere or disrupt the normal operating and learning environment at CVCC. Fees for use of building or grounds space may be assessed. Specifically prohibited is the distribution of printed solicitation material

on parked vehicles and on CVCC bulletin boards.

CVCC students and employees may utilize certain bulletin boards designated by the President (or designee) to advertise the sale of used personal items. The President (or designee) shall establish procedures and guidelines for such usage.

Solicitation for charitable, community service, not-for-profit, or civic purposes must be approved in accordance with procedures and guidelines established by the President (or designee). Such solicitation must not interfere or disrupt the normal operating and learning environment at CVCC.

FREE SPEECH, PUBLIC ASSEMBLY, AND DISTRIBUTION/PETITIONING

Consistent with its educational mission, CVCC encourages the free exchange of ideas on campus, while assuring that other important CVCC interests and activities are not infringed upon or disrupted. CVCC recognizes the value of providing students, faculty, staff and others the opportunity to assemble and communicate with one another, as well as to distribute informative printed material to members of the CVCC community. CVCC is committed to protecting First Amendment rights of individuals and supports reasonable opportunity for people to distribute printed materials and to engage in other forms of expression and assembly on campus (collectively termed "expression activities" for purposes of this policy). Except with respect to commercial expression, and expression (e.g., obscenity, defamation, fighting words, harassment) which the Supreme Court has held constitutes content which can be proscribed, CVCC will not make decisions or take actions based on the content of expressive activities on campus. However, the President shall establish restrictions, unrelated to the content of noncommercial expression, on the time, place and manner of use of CVCC facilities for expression activities so that other important CVCC interests and activities are not infringed upon or disrupted. Such restrictions shall be published as part of the procedures for obtaining authorization to use CVCC facilities for expression activities. All persons engaging in expression activities must observe such restrictions. Failure to comply with established restrictions may result in sanctions including, but not limited to, charges of trespass and forfeit of the right to use CVCC facilities for further expression activities.

Unlawful conduct is not permitted. Unlawful conduct is conduct that is prohibited by Federal, State, or local law or regulation, or that violates one or more rights of a person or entity under the common law of North Carolina.

In order to provide opportunity for access to multiple and diverse persons/groups, the President (or designee) may establish procedures and/or guidelines to regulate use by a single person/group.

Individuals have the right to dissent to the expression activities of another. However, such right to dissent shall not interfere with the authorized expression activities of another and need not occupy the same forum at the same time.

Use of public address systems or amplified sound is not permitted.

Duly authorized persons/groups may distribute printed materials by hand within designated areas on the condition that such material is for informational (not commercial) purposes. Such persons/groups shall be responsible for any clean-up costs associated with the distribution of such materials. Printed materials may not be distributed through CVCC's internal mail system.

Persons/groups utilizing CVCC facilities must comply with CVCC Policy 6.2 (Use of CVCC Facilities, Approval, Fees, Appropriate Use).

CVCC reserves the right to immediately terminate any expression activities otherwise permitted by this policy if in the judgment of CVCC officials, continuation of such activities will result in: (a) danger to participants or others; (b) unlawful conduct by participants or others; or (c) interference with disruption or disturbance of the CVCC's educational mission, operations, business, or functions.

STUDENT CONDUCT POLICY

Students are expected to conduct themselves appropriately. The following conduct is considered inappropriate and may result in disciplinary action, including suspension or expulsion from CVCC:

a) Interruption or in any manner interfering with normal CVCC operations;

b) Destruction, damage, or misuse of CVCC equipment, facilities, or property;

c) Physical abuse of another person in the CVCC community;

d) Theft of property belonging to another in the CVCC community;

e) Participation in hazing;

f) Plagiarism and other forms of academic cheating (see also the Academic Dishonesty Policy);

g) Harassment, including harassment of a sexual nature and harassment of a student with disabilities;

h) Violation of CVCC policies including those regarding the use and/or possession of firearms or other weapons, alcoholic beverages, illegal drugs or controlled substances, and tobacco products;

i) Making a threat to the safety of the CVCC community; or

j) Commission of any other offense which, in the opinion of the administration or faculty, may be contrary to the best interest of the CVCC community.

Disciplinary action may include the following: (1) warning, (2) probation, (3) suspension, or (4) expulsion. The Chief Student Services Officer may include campus service as a condition of probation provided that the service required is designed to educate and enlighten the student regarding the policy violated. A faculty member may impose disciplinary action on a student in his/her classes and on a student who is participating in school activities under his/her supervision. The disciplinary action imposed by a faculty member may include a warning, probation, or dismissal from the applicable class or activity. Only the President, Vice Presidents, and the Chief Student Services Officer have the authority to suspend a student from CVCC. Permanent expulsion of a student from CVCC must be authorized by the President. Suspensions and expulsions for disciplinary reasons shall be recorded in the student's permanent record (on the transcript). Students are entitled to appeal any disciplinar action in accordance with CVCC's student due process policy.

STUDENT ADVOCATE. Students may contact the Director of Admissions for assistance regarding academic problems and/or concerns. The Director of Admissions (or designee) will work with the student, instructors, academic supervisors, and other College resources to identify and implement the best available solution to academic problems and/or concerns.

STUDENT DUE PROCESS PROCEDURES. Upon request by a student, the Chief Student Services Officer will provide assistance with this process. Students who have a grievance with CVCC may have their grievance reviewed in accordance with this student due process policy. A grievance for purposes of this policy is a dispute regarding a final course grade received, a dispute regarding a disciplinary action imposed, other allegation of unjust treatment, or discrimination on the basis of race, color, national origin, sex/gender, religion, creed, age, or disability. The "event date" for purposes of this policy is as follows:

For a grievance regarding a final course grade received, the date on which the grade was mailed to the student, made available to the student through an online portal or other electronic means, or otherwise made available to the student; For a grievance regarding disciplinary action, the date on which written notice of the disciplinary action was mailed or otherwise provided to the student; or For other grievances, the date on which the alleged unjust or discriminatory treatment occurred.

Steps that students must take to have their grievance reviewed. The student is not required in any step to confront alone the person he/she claims is responsible for the unjust or discriminatory treatment.

Step 1 - As soon as possible but no later than the 14th calendar day (excluding CVCC institutional holidays) following the "event date," the student is encouraged to initiate a discussion of the grievance with the CVCC employee who is allegedly responsible for the unjust or discriminatory treatment and/or with that employee's immediate supervisor (the "Step 1 Supervisor" for purposes of this policy). This discussion should include an attempt to resolve the grievance.

Step 2 - If the grievance is not resolved in Step 1, the student may initiate a Step 2 grievance review by completing the student portion of the CVCC Student Grievance Form ("the Form") and submitting the Form

22

to the following CVCC official (the "Step 2 Supervisor" for purposes of this policy):

• If the Step 1 Supervisor is other than an executive director, dean, or vice-president, the Step 2 Supervisor shall be the dean for the school in which the grievance originated; or
• If the Step 1 Supervisor is an executive director, dean, or vice-president, the Step 2 Supervisor shall be the immediate supervisor of the Step 1 supervisor.

The student must submit the Form as soon as possible after completetion of Step 1 but no later than the 21st calendar day (excluding CVCC institutional holidays) following the "event date." Students may obtain the Form from the Step 2 Supervisor or from the Chief Student Services Officer.

The Step 2 Supervisor shall review the grievance and provide the student with a Step 2 written decision within 7 calendar days (excluding institutional holidays) following receipt of the Form. The Step 2 Supervisor shall also complete the supervisor portion of the Form and submit a copy to the Office of the President.

Step 3 - If the grievance is not resolved in Step 2, the student may initiate a Student Grievance Committee review by completing the student portion of the CVCC Student Grievance Committee Review Form (the "Committee Review Form") and submitting that Committee Review From to the Office of the President as soon as possible but no later than the 7th calendar day (excluding CVCC institutional holidays) following receipt of the Step 2 written decision. Students may obtain a Committee Review Form from the Office of the President or from the Chief Student Services Officer.

Following receipt of a Committee Review Form, a Student Grievance Committee ("the Committee") shall be selected. The Committee membership (5 voting members and a non-voting chair) shall be as follows and shall not include any members who have had any involvement in the grievance to date:

• Committee Chair (a non-voting member) - A Vice President selected by the President;
• 2 voting representatives selected by the Committee Chair from a group of 9 faculty or non-credit professional staff representatives (3 from each academic school) appointed by the President;
• 1 voting representative selected by the Committee Chair from a group of 2 Student Services counselors or admissions representatives appointed by the President; and
• 2 voting student representatives selected by the Committee Chair from the group of 5 current SGA officers.

The Committee Chair shall schedule a review/hearing by the Committee within 7 calendar days (excluding CVCC institutional holidays) following the receipt of the Committee Review Form by the Office of the President. Following the review/hearing, the Committee must decide if the student has been treated unjustly and if so, must recommend corrective action. Committee decisions shall be determined by a majority vote of the Committee members and are final. Decisions made by the Committee shall be provided in writing to the student by the Committee Chair within 3 calendar days following the completion of the review and hearing. Copies of the written decision shall be provided to the Chief Student Services Officer, to the Office of the President, and to the CVCC employees involved in Steps 1 and 2 of the grievance process. The following exception applies if the CVCC employee who is allegedly responsible for the unjust treatment is a Vice President. The Step 1 Supervisor shall be another Vice President appointed by the President.

PROHIBITION OF SEXUAL HARASSMENT

CVCC is committed to providing its students, faculty, and staff with an educational and work environment in which all people are treated with respect and dignity. CVCC maintains a strict policy prohibiting sexual harassment, discrimination, and harassment on the basis of race, color, religion, gender, national or ethnic origin, age, disability, veteran or active military status, genetic characteristics, or any other category protected by law. This policy is applicable to all employees and students and applies to the workplace, the classroom, or in any other setting where students, faculty, and staff may find themselves in connection with their education or employment. Such conduct is unlawful and will not be tolerated

by CVCC. While this policy sets forth CVCC's goal of promoting an educational and work environment that is free of harassment, it is not designed or intended to limit our authority to discipline or take remedial action for conduct which is deemed unacceptable, regardless of whether that conduct satisfies the legal definition of harassment.

Sexual Harrasment
In the employment context, sexual harassment refers to sexual advances, requests for sexual favors, and/or verbal or physical conduct of a sexual nature, which when:submission to or rejection of such advances, requests, or conduct is made either explicitly or implicitly a term or condition of employment, or as a basis for employment decisions or; such advances, requests or conduct have the purpose or effect of unreasonably interfering with an individual's work performance by creating an intimidating, hostile, humiliating, or sexually offensive work environment.

Under these definitions, direct or implied requests by a supervisor for sexual favors in exchange for actual or promised job benefits, such as favorable reviews, salary increases, promotions, increased benefits, or continued employment constitutes sexual harassment. Likewise, direct or implied requests for sexual favors by one who has the power or authority to influence a student's academic record or to compromise one's full and unfettered participation in the CVCC community, academically, and otherwise, constitutes harassment. Similarly, harassment consists of sexual advances, requests, or conduct that has the purpose or effect of unreasonably interfering with one's freedom by creating an intimidating, hostile, humiliating, or sexually offensive academic environment.

While in some cases individuals may make sexual comments or jokes or personal advances without intending harm, such actions can be unwanted, threatening, and perceived as harassment. Stopping sexual harassment in its many forms requires an increased awareness by everyone at the College of the impact that such actions may have on others. The following is a partial list of unwelcome, unwanted behavior, which may be considered sexual harassment:

• Unwelcome sexual advances or propositions – whether they involve physical touching or not;
• Written or verbal sexual epithets, jokes, or references to sexual conduct, gossip regarding one's sex life;
• Written or verbal abuse of a sexual nature, use of sexually degrading, or vulgar words to describe an individual;
• Leering, whistling, brushing against another's body, sexual gestures;
• The display of sexually suggestive objects, pictures, posters, cartoons, websites, and any form of electronic communication;
• Comments about an individual's body or appearance, or regarding one's sex life, experience, sexual prowess, or sexual deficiencies;
• Asking questions about sexual conduct or probing in to one's sex life or relationships; and
• Harassment consistently targeted at only one sex, even if the content of the verbal abuse is not of a sexual nature.

Discriminatory Harassment
Discriminatory harassment in the employment context refers to any verbal or physical conduct that denigrates, threatens, intimidates, or shows hostility or aversion to an individual because of that person's race, color, religion, gender, national, or ethnic origin, age, disability, veteran or active military status, genetic characteristics when such conduct has the purpose or effect of unreasonably interfering with an individual's work performance by creating an intimidating, hostile, humiliating, or offensive work environment. Likewise, discriminatory harassment in the educational context refers to verbal or physical conduct of a similar nature directed at a student, which has the purpose or effect of unreasonably interfering with one's freedom by creating an intimidating, hostile, humiliating, or sexually offensive academic environment.

The following is a partial list of unwelcome, unwanted behavior, which when based upon one's race, color, religion, gender, national, or ethnic origin, sexual orientation, age, disability, veteran or active military status, or genetic characteristics, may be considered discriminatory harassment:

• Verbal or physical conduct that denigrates or shows hostility or aversion toward an individual or group;
• Epithets, slurs, negative stereotyping, or threatening, intimidating, or hostile acts;
• Written or graphic material that denigrates or shows hostility or aversion toward an individual or group, including the display of objects, pictures, posters, cartoons, websites, and any form of electronic communication.

Unprofessional Relationships and Abuse of Authority
Amorous relationships that might be appropriate in other circumstances have inherent dangers when they occur between supervisor and employ-

ee, or between any member of the faculty, administration or staff, and students of the College. Such relationships are fundamentally asymmetric, and unprofessional and they raise serious concerns about the validity of the consent, conflict of interest, and unfair treatment of others. CVCC faculty, administrators, managers, and officers should be aware that any romantic involvement with any student or employees over whom they serve in a supervisory capacity could expose them to disciplinary action under this policy and individual liability under the law. Even when both parties have initially consented to such a relationship, it is the administrator, manager, or faculty member who, by virtue of his or her status, may be held accountable for the unprofessional relationship or abuse of authority. In addition, such relationships are to be avoided because they may create an impression on the part of colleagues of inappropriate or inequitable academic or professional advantage or favoritism that is destructive to the working and learning environment that the College seeks to foster and may raise doubts about the integrity of the work performed.

Reporting A Complaint of Harassment or Discrimination
Employees who believe that they are being harassed or discriminated against, or have taken measure to stop the harassment or discrimination but have been unsuccessful, may report a complaint to any of the following persons:

• The employee's immediate supervisor;
• Any CVCC administrator;
• CVCC's personnel office; or
• The CVCC President.

Students who believe that they are being sexually harassed, or who have taken measures to stop the harassment but have been unsuccessful, may report a complaint with any to the following College representatives:

• The Chief Student Services Officer;
• Any Dean;
• Any Vice President; or
• The CVCC President.

If individuals decide they want to make a report, contact should be made with the CVCC representative (in list above) with whom they feel the most comfortable. As with any job-related or student complaint, CVCC encourages following the chain of command where possible. However, due to the personal nature of harassment and discrimination and CVCC's strong opposition to sexual harassment, any employee/student who feels he or she is being subject to l harassment or discrimination can complain to any one of the persons listed previously, orally or in writing.

When making a complaint of harassment or discrimination, the employee/student should be prepared to provide the following information:

• Name;
• The name of the person or persons committing the harassment or discrimination;
• The specific nature of the harassment or discrimination; or
• Whether the employee/student has previously reported such harassment or discrimination and, if so, when and to whom.

The appropriate Vice President is the person designated by the President to be investigator of complaints of harassment or discrimination which involve only employees. The Vice President may delegate the investigation to another College employee, under his or her supervision. In the event the harassment or discrimination complaint is against the Vice President, the investigator shall be a CVCC employee appointed by the President.

The Chief Student Services Officer is the person designated by the President to be investigator of complaints of harassment or discrimination which involve students only or students and employees. The Chief Student Services Officer may delegate the investigation to another CVCC employee under his or her supervision. In the event the harassment or discrimination complaint is against the Chief Student Services Officer, the investigator shall be a CVCC employee appointed by the Vice President with primary responsibility for student services or the President.

The College's complaint procedure provides for an immediate, thorough and objective investigation of the harassment or discrimination. All actions taken to investigate and resolve complaints through this process will be conducted in a matter that preserves confidentiality to the greatest extent possible under the circumstances, without compromising the thoroughness of the investigation. The investigation will be completed and a determination made and communicated to the person filing the harassment complaint as soon as practical.

If CVCC determines that a violation of this policy has occurred, it will take appropriate remedial action against a person found to have engaged in prohibited conduct. The discipline will be commensurate with the se-

verity of the offense. Any person who is found to be in violation of this policy is subject to disciplinary action up to and including discharge from employment or expulsion.

Protection Against Retaliation
Retaliation is a very serious violation of this policy and should be reported immediately using the complaint process described above. Retaliation, whether by the alleged wrongdoer or other individuals, can take any of many forms. Retaliation is defined as any materially adverse action that might well have dissuaded a reasonable person from making or supporting a complaint of discrimination or harassment. Examples of tangible, adverse actions may include a transfer to an undesirable location, a reduction in work hours, a serious loss in responsibility, the denial of an earned benefit, or termination of employment.

Retaliation against any individual for reporting discrimination or harassment or against one who participates in an investigation will not be tolerated. In responding to reports of retaliation, the College will follow the same process, outlined above, including conducting a prompt, thorough and impartial investigation and taking appropriate remedial measures.

False Accusation
CVCC recognizes that the question of whether a particular course of conduct constitutes discrimination or harassment requires a factual determination. The College also recognizes that false accusations can have serious effects on innocent persons. If, after investigation, it is clear that a person who has accused another of discrimination or harassment has maliciously or recklessly made a false accusation, the accuser will be subject to appropriate disciplinary action, up to and including termination or, in the case of a student, expulsion. In such an event, the College will also take appropriate action to restore the reputation of the accused.

SEXUAL ASSAULT PROTOCOL
Catawba Valley Community College is committed to the maintenance of an environment that is supportive of its primary educational mission and free from all exploitation and intimidation. CVCC will not tolerate rape, sexual assault, or other forcible and non-forcible sex offenses and supports this policy for students, faculty and staff by sponsoring prevention, intervention and education programs specifically addressing these offenses. Information and awareness programs are offered at various times by way of a variety of events throughout the year. CVCC recognizes the importance of assisting individuals who are victims of sexual assault and helping them to regain a sense of personal control over their lives and decisions. The protocol for reporting of and responding to sex offenses is available on the CVCC website, in Student Services, and in the Personnel Office.

Definition of Sex Offenses

• Sex Offenses (Forcible) – Any sexual act directed against another person, forcibly and/or against that person's will; or not forcibly or against the person's will where the victim is incapable of giving consent.
• Forcible Rape – The carnal knowledge of a person, forcibly and/or against that person's will; or not forcibly or against the person's will where the victim is incapable of giving consent because of temporary or permanent mental or physical incapacity (or because of youth).
• Forcible Sodomy – Oral or anal sexual intercourse with another person, forcibly and/or against that person's will; or not forcibly against the person's will where the victim is incapable of giving consent because of youth or because of temporary or permanent mental or physical incapacity.
• Sexual Assault With An Object – The use of an object or instrument to unlawfully penetrate, however slightly, the genital or anal opening of the body of another person, forcibly and/or against that person's will; or not forcibly or against the person's will where the victim is incapable of giving consent because of youth or because of temporary or permanent mental or physical incapacity.
• Forcible Fondling – The touching of the private body parts of another person for the purpose of sexual gratification, forcibly and/or against that person's will; or not forcibly or against the person's will where the victim is incapable of giving consent because of youth or because of temporary or permanent mental incapacity.
• Sex Offenses (Non-forcible) - Unlawful, non-forcible sexual intercourse.
• Incest – Non-forcible sexual intercourse between persons who are related to each other within the degrees wherein marriage is prohibited by law.
• Statutory Rape – Non-forcible sexual intercourse with a person who is under the statutory age of consent.

There are many instances when children and adolescents are present on the campuses of Catawba Valley Community College. Campus Safety and Security personnel work togther with local law enforcement to inform, educate and maintain the safety and security of students, employees and visitors on the various Colleg camuses.

Reporting Sexual Assault

If you are sexually assaulted, you should do the following:
- **Go to a safe place.**
- **Do not shower or bathe.**
- **Do not urinate, if possible.**
- **Do not eat, drink, smoke or brush your teeth if oral contact took place.**
- **Do not destroy or wash the clothes you were wearing. If you change, place your clothes in a paper bag.**
- **Contact Campus Security, local law enforcement (Catawba County Sheriff's Department, Hickory Police Department, Newton Police Department, Alexander County Sheriff's Department, or Taylorsville Police Department) or the Executive Officer of Student Services.**
- **Seek medical treatment immediately (preferably within 72 hours).**

Following the above suggestions will ensure the preservation of evidence. Victims of sexual assault are encouraged to contact campus security, local law enforcement or Student Services immediately following an incident. A report may be filed with campus security and/or local law enforcement. The filing of a report does not obligate the victim to pursue charges, but does make filing of charges easier at a later date.

Options available to sexual assault victims are resolution through the College's Policies and Procedures Manual and/or the judicial system (criminal and/or civil). Catawba Valley Community College will assist in pursuing option(s) elected by the victim. The College and the courts are independent systems; charges may be filed in either or both systems.

If an assault victim does not wish to pursue action with the College or the judicial system, the victim may make an anonymous report. With the victim's permission, the College can file a report on the details of the incident without revealing the victim's identity. This type of anonymous report helps to ensure the future safety of the victim and others. With such information, the College can keep accurate records about the number of incidents involving students, determine where there is a pattern of assaults with regard to a particular location, method, or assailant, and alert the campus community to potential danger.

Victim's Rights

- To have all incidents and medical records kept confidential
- To be treated without prejudice based upon race, class, lifestyle, sex, age, occupation, or religious beliefs
- To receive private and confidential examination/treatment for personal injuries, sexually transmittable disease, and pregnancy.
- To be considered as credible as a person reporting any other crime\
- To be made aware of the options available through the College and the judicial system
- To receive emotional and psychological support and advocacy
- To prosecute or not to prosecute
- To receive current information on community and campus resources
- To answer only those questions relevant to the crime
- To freedom from harassment
- To feasible class schedule adjustments (without academic or financial penalty) as necessary to minimize the potential for contact with the alleged perpetrator or those associated with the alleged perpetrator.

Taking Action for a Sexual Violation

To begin a college action where both the victim and the alleged perpetrator are students, the victim should file a complaint for sexual assault with the Executive Officer of Student Services. An immediate investigation shall follow. Due process procedures as outlined in the Policy and Procedure Manual, Section 4.62 and 4.652 will apply except as follows: (a) the composition of the Appeals Committee shall have at least one (1) member that is the same gender as the victim, (b) a decision should be made within thirty (30) days on a complaint for sexual assault, and (c) an attempt will be made to communicate due process outcomes in person (to both the victim and the alleged perpetrator), (d) an appropriate treatment program may be a condition of a probation or suspension.

To begin a college action where the victim is a student and the alleged perpetrator is a College employee, the victim should file a complaint for sexual assault with the Executive Officer of Student Services (if a curriculum student) or the Dean of the appropriate School (if a continuing education student). An immediate investigation shall follow. Due process procedures as outlined in the Policy and Procedure Manual, Sections 6.73, 6.731, and 6.8 will apply except as follows: (a) the composition of the Hearing Committee shall have at least one (1) member of the same gender as the victim, (b) a decision should be made within thirty (30) days on a complaint for sexual assault, and (c) an attempt will be made to communicate due process outcomes in person (to both the victim and the al-

leged perpetrator).

There are many instances when children and adolescents are present on the campuses of Catawba Valley Community College. Campus Safety and Security personnel work together with local law enforcement to inform, educate and maintain the safety and security of students, employees and visitors on the various College campuses.

North Carolina Law **[NC General Statute 7B-301 and 115C-400]** requires reporting of any known or suspected case of child abuse or neglect (a child is an unmarried victim under age 18) by a "parent, guardian, custodian or caretaker" to the local Department of Social Services within 24 hours.

Resources for Victims of Sexual Assault

Emergency 911
CVCC Campus Emergency 711
Campus Security .... 327-7000 ext. 4610
Executive Officer of Student Services .... 327-7000 ext. 4143
Student Services.. 327-7000 ext. 4216
Rape Crisis Center
Catawba County • www.rapecrisiscenter.com • 322-6011
Alexander County 635-8881

Catawba County Sheriff's Department 465-8301
Hickory Police Department..328-5551
Hickory Police Department, Victim's Services..................................261-2642
Newton Police Department 465-7430
Taylorsville Police Department 632-2218
Alexander County Sheriff's Department 632-4658

Catawba Valley Medical Center Emergency 326-3850
Frye Regional Medical Center Emergency.......................................345-5625

Victim's Compensation Fund... 1-800-826-6200
NC SAVAN (Statewide Automated Victim
Assistance & Notification).. 1-877-627-2826
                                        www.ncsavan.org
RAINN (Rape, Abuse & Incest National Network).............. 1-800-656-HOPE
                                        www.rainn.org
NC Coalition Against Sexual Assault 1-919-871-1015
                                        www.nccasa.net
NC Coalition Against Domestic Violence   1-800-232-9124
                                        www.nccadv.org

Because of the traumatic nature of sexual assault, victims are encouraged to seek immediate counseling. The Rape Crisis Center provides counseling and group services free of charge. Student Services will assist victims with any academic concerns or change in class schedule requests that are feasible.

Response to Sexual Assault

College personnel will observe the following guidelines when responding to a sexual assault report:
- Assess the victim's well being, render aid, and express concern and assurance.
- Notify the Director of Campus Security and/or the Executive Officer of Student Services.
- Identify the assailant if possible.
- **Do not question the victim about the details of the incident; other trained personnel will do this.**
- Make sure the victim is in a secure place.
- Identify the location of the crime.
- Do not touch, move or collect any evidence unless that evidence may be lost if you do not. If you have to collect evidence, record the following information:
  1. Item seized,
  2. Time seized, and
  3. Location seized.
- If evidence is given to you, record the following information:
  1. The person's name, address, telephone number and date of birth,
  2. The item given to you,
  3. The time and location where the person seized the item,
  4. The time you received the item, and
  5. Document chain of custody of the evidence.
- **Encourage the victim to seek medical treatment (preferably within 72 hrs.)**
- Assist law enforcement or medical personnel responding to the incident as needed.

STUDENT TRANSPORTATION

Students are requested to be especially alert and careful in entering and leaving the school grounds. The maximum on- campus speed is 10 miles per hour. Employees, students, and visitors are expected to park in designated parking spaces only. Handicapped parking spaces are designated and are regulated by NC General Statutes. Vehicles parked in areas not designated for parking may be ticketed and/or towed at vehicle owner expense. CVCC will not be responsible for vehicles damaged while parked on the school premises, during towage, or while being stored.

In order to maintain open fire lanes and clear roadways in case of emergency, the Board of Trustees of CVCC has established parking regulations. Student and visitor parking shall be in the lots so designated. Students, faculty and staff parking will be unreserved and will require a parking hang tag which will be issued during registration.

INCLEMENT WEATHER CLOSINGS

Catawba Valley Community College will cancel classes only when the weather is considered too hazardous for safe travel to and from the college. The decision will be made as soon as possible by the President or designee, in order to inform students and staff. An official announcement stating that classes are delayed or the College is closed will be made over certain area television and radio stations. The automated attendant (updated college closing information option) on the telephone system (828) 327-7000, and CVCC's web page (www.cvcc.edu), will also provide the announcement concerning class delays or cancellations.

ACADEMIC STANDARDS

DEGREES, DIPLOMAS, AND CERTIFICATES

Catawba Valley Community College awards the ASSOCIATE in APPLIED SCIENCE DEGREE (AAS) upon the successful completion of a two-year program of study in the School of Academics, Education, and Fine Arts; the School of Business, Industry, and Technology; the School of Health and Public Services.

The ASSOCIATE in ARTS, ASSOCIATE in FINE ARTS, and ASSOCIATE in SCIENCE DEGREE is awarded graduates of college transfer curriculums. The College also awards the ASSOCIATE in GENERAL EDUCATION (A.G.E.) degree.

Upon completion of a vocational program of study one or more years in length, CVCC grants a DIPLOMA in the major area of training.

Program CERTIFICATES are awarded in curricula where the curriculum provides for skill-training subjects only. Certificates of course completion are also awarded for non- credit short courses and special programs.

HIGH SCHOOL EQUIVALENCY DIPLOMAS are awarded by the North Carolina Department of Community Colleges to individuals who make satisfactory scores on the General Educational Development (GED) tests.

REGISTRATION

Registration is generally not permitted in a class on or after the start date of the class unless the registration is a course section switch. Approval for registration in a class on or after the start date of the class must be based on extenuating circumstances and be educationally sound as determined by the Vice President of Instruction or designees.

The Executive Officer of Student Services or designee is responsible for establishing and communicating the dates, times, locations, and processes for registration in curriculum courses.

Registration in certain courses may be restricted to students meeting certain criteria established by the North Carolina Community College System or the Vice President of Instruction.

Students enrolling in credit courses are expected to register for course work during the registration periods specified for each semester. Registration for non-credit classes is usually held at the first class meeting for the course.

Course additions will not be approved after the ten (10) percent point of the class. Section changes are allowable under departmental jurisdiction with the approval of the department head.

Veterans and other eligible persons certified by the Veterans Administration for Education Payments (G.I. Bill) cannot receive such benefits for any course not required for graduation in their approved educational program of study. Such individuals may register for other than required courses, but such courses will not be considered in determining the enrollment status of the recipient of educational benefits.

COURSE LOAD

Unless required by suggested curriculum sequence, students are strongly encouraged not to enroll for more than 18 credit hours per semester. Should you choose to do so, you need to meet with the Executive Officer of Student Services or designee prior to enrolling for classes.

COURSE PREREQUISITES AND CO-REQUISITES

CVCC and each student are responsible for ensuring that prerequisite and co-requisite requirements have been satisfied.

If requisite competencies are not documented in the student's CVCC transcript but are evidenced by completion of academic experiences at other regionally accredited institutions or completion of certain testing administered by other institutions, then satisfaction of the requisite shall be documented in the student's record on the student database following processes specified by the Chief Student Services Officer or designee.

If requisite competencies are not documented in the student's CVCC transcript and are not evidenced by academic experiences completed elsewhere as outlined above, the academic supervisor (department head, associate dean, etc.) for the course may authorize enrollment in the course

if the requisite competencies are evidenced by other life experiences such as work (for example, the department head for math could make this determination for a math course). Such authorization shall be documented in the student's record on the student database following processes specified by the Executive Officer of Student Services or designee.

WAIVER OF DEVELOPMENTAL COURSES may be waived based upon coursework successfully completed (grade of C or better) at a regionally accredited college using the following guidelines:

- Completion of the appropriate developmental coursework at another college.
- Completion of a college-level course, which has a developmental prerequisite/corequisite as indicated in the current CVCC college catalog, may permit waiving the prerequisite. This includes a course taken at a regionally accredited college other than CVCC if the course is equivalent in content to a course in the current CVCC catalog.

CLASSIFICATION/ENROLLMENT STATUS

Catawba Valley Community College classifies students in several categories for various administrative purposes. Those classifications and their definitions are as follows:

FULL-TIME STUDENT. A full-time student is any student enrolled for at least 12 credit hours in the fall and spring semesters and 9 credit hours in the summer semester.

FULL-TIME STUDENT FOR TUITION PAYMENT. For the purpose of tuition and fee payment, a full-time student is any student enrolled in at least 16 credit hours in any semester.

PART-TIME STUDENT. A part-time student is any student enrolled for fewer than 12 credit hours in the fall and spring semesters and 9 credit hours in the summer semester.

PART-TIME STUDENT FOR TUITION PAYMENT. For the purpose of tuition and fee payment, a part-time student is any student enrolled for less than 16 credit hours in any semester.

FRESHMAN STUDENT. A freshman student is any student who has earned fewer than 32 semester hours of credit.

SOPHOMORE STUDENT. A sophomore student is any student who has earned a minimum of 32 semester hours of credit.

SPECIAL CREDIT STUDENT. Individuals may enroll in classes without pursuing a diploma or degree. Persons enrolling under these circumstances are considered SPECIAL CREDIT STUDENTS. Placement tests may be required depending upon the student's educational background and the prerequisites/corequisites of the courses in which the student wishes to register. Special credit students who plan to enter a program of study, but are undecided about a program of study are classified as undeclared special credit students. Undeclared special credit students may complete up to 18 credit hours (other than developmental credit hours). At this point, the undeclared special credit student should see a Student Services Admissions counselor to discuss declaration of a major.

AUDITING A COURSE. Students may attempt a course as an audit student one time. Students may not audit a class for which they have received credit unless justified by a clear benefit connected to a current program of study at CVCC. A change from an auditing status to a credit status (or vice versa) on or after the start date of the class must be approved by the instructor of the class and the Executive Officer of Student Services.

Students wishing to audit a course must satisfy all requisite requirements for the course just as do students taking a course for credit. Students who audit a course will not receive a grade (other than AU) or credit for the course. Credit will not be granted under advanced placement procedures after enrolling in a course as an audit student. Tuition and fees for auditing a course are the same as those for enrolling in a course for credit.

Students who audit are required to comply with class attendance policies, complete assignments, and participate in class activities. They are not required to take examinations unless specified by the academic department. Students should be aware that audited credit hours do not qualify for federal financial aid, VA Benefits, and certain other grants and/or scholarships.

ATTENDANCE (MEMBERSHIP)

Instructors are required to establish attendance requirements and maintain accurate records of membership/attendance for their classes in accordance with the North Carolina Community College System and other regulatory guidelines. The attendance requirements for a class shall be included in the syllabus for the class.

Students shall be permitted excused absences from all classes two days per academic year for religious observances required by the faith of a student. Students shall be provided reasonable opportunity to make up any tests or other work missed due to an excused absence for a religious observance. Specific procedures that students must follow to obtain authorization for an excused absence for a religious observance shall be established by the Chief Academic Officer. These procedures shall, at a minimum, require the student to submit a written request for the absence sufficiently in advance to permit the instructor and student to develop a sound plan for making up any missed class work. All students must plan absences from a class so that their total absences, including any absences authorized in accordance with this policy, do not exceed the total absences otherwise permitted by the instructor, a certifying board, or an accrediting agency. For purposes of this policy, an academic year begins on the first day of the fall semester and ends on the last day of the summer semester in the following calendar year.

Additionally, instructors are required to maintain and submit accurate attendance and/or membership reports according to instructions provided by the Chief Student Services Officer or designee. Attendance and/or membership records shall comply with all federal and state guidelines related to the disbursement of financial aid. Procedures to ensure the recording and reporting of membership/attendance in accordance with the above policies shall be established by the Chief Financial Officer.

If an instructor fails to meet his/her class within 15 minutes of its scheduled beginning time, the students may leave without attendance penalty.

ELECTIVE COURSES

In selected curricula students may take elective courses to meet graduation requirements. Where provisions have been made and approved, students may elect to take cooperative education in place of electives.

DISTANCE EDUCATION

The mission of distance learning is to enable students flexibility to obtain an education or courses at their convenience. Catawba Valley Community College's Distance Learning Program consists of telecourses, Internet courses and North Carolina Information Highway (NCIH) courses. The same quality outcomes are maintained for distance learning courses as for all CVCC course offerings.

CVCC offers courses in the telecourse format for regularly enrolled students to meet program requirements or as stand-alone courses for those interested in taking a course in a particular subject area. Telecourse students work independently, watch televised programs, and read printed materials with guidance from course facilitators who use a variety of communication tools and instructional techniques. Required on-campus class meetings are fewer than traditionally taught classes.

Internet-based courses are available in a variety of disciplines. Students taking courses over the Internet work independently, study at their own convenient time and place, and complete and submit assignments electronically.

North Carolina Information Highway (NCIH) courses are both sent and received from the information integrated network classroom through a statewide network. Students interact with faculty: via video monitors, microphones, faxes, telephone, and other appliances. NCIH classes enable faculty at CVCC to teach to clusters of students at distance sites or for students in the NCIH classroom to be able to receive instruction from a remote site. This two-way interactive system allows the college to import courses giving students access to courses which are not available locally.

Internet courses, like telecourses, limit the number of visits to the college campus. Students enrolling in distance education courses pay regular tuition and fees, have access to all student services, study under the college's rules and regulations, and receive academic or continuing education credit.

ACADEMIC CREDIT

The Chief Academic Officer or designee will ensure appropriate procedures and guidelines exist for the granting and recording of academic credit. CVCC shall award credit for all curriculum courses completed at CVCC with a final grade of D or higher.

Additionally, credit may be awarded as a result of the following processes: (credits awarded through these processes shall not exceed sixty-five (65) percent of the total credit hours required for graduation in a student's program of study)

a. CVCC will grant transfer credit for a course completed at a regionally accredited institution provided the coursework is relevant to the student's program of study, the competencies required for successful completion are at least equivalent to those required for successful completion of the equivalent CVCC course, and the final grade received as evidenced by an official transcript was a C-minus or higher;

b. CVCC will grant transfer credit for a course completed at a foreign (outside the United States) institution provided that the coursework is relevant to the student's program of study, the competencies required for successful completion are at least equivalent to those required for successful completion of the equivalent CVCC course, and the final grade received was a C-minus or higher. The Chief Academic Officer or designees will determine relevance to the program of study and equivalence of competencies. Students desiring transfer credit must submit transcripts that have been evaluated by a current member of NACES (National Association of Credential Evaluation Services) at www.naces.org. (The name the student is currently using should appear on the transcript as well as the date of birth.) The evaluating agency for post-secondary transcripts (college/university) must send the evaluation report directly to CVCC's Student Records Office. Student copies of evaluations will not be accepted;

c. Articulation agreements may be established with high schools whereby high school students may receive transfer credit for courses completed at their high school;

d. Students enrolled in degree, diploma, or certificate programs and special students may petition for credit to be granted through an advanced placement assessment. To be eligible for an advanced placement assessment, the student must provide evidence of prior education and/or experience which would likely have provided skills, knowledge, and/or abilities similar to those provided in the CVCC course. The Dean for the school in which the course is offered will determine the credit to be allowed, if any. Credit will be based upon the minimum attainment of a grade of "B" on oral, written, and/or manipulative tests and the credit hours indicated for the appropriate course in the current catalog; or

e. Students may earn credit by successfully completing (score of 3 or better) Advanced Placement (AP) exams sponsored by the College Entrance Examination Board and/or by successfully completing (scores per ACE guide) College Level Examination Program (CLEP) exams.

Transfer credits, credits granted based on advanced placement assessments, and credits earned by successful completion of AP/CLEP exams may be used to satisfy program of study requirements but will not be included in the calculation of semester or cumulative grade point averages (GPAs).

Transfer credits, credits granted based on advanced placement assessments, and credits earned by successful completion of AP/CLEP exams may not be used to obtain VA educational benefits or federal financial aid.

No fee or tuition charge is imposed for advanced placement assessment for curriculum course credit. Some charges may apply for certain non-credit course assessments.

If a Workforce Development/Corporate and Continuing Education advance placement exam is requested to certify course competency, a flat rate of $30 for each testing session will apply. An additional $10 will be charged for each additional person tested.

COURSE SUBSTITUTION

Courses may be substituted in a curriculum for a student only under exceptional circumstances and only if the substitution is within the NCCCS Curriculum Standards. Course substitutions must be recommended by the student's academic advisor. Course substitutions must be approved by the Department Head or Director of the requesting curriculum, by the Department Head or Director responsible for the course to be substituted, and by the Director of Student Records.

CURRICULUM COURSE REPEAT POLICY

A student may attempt a course a maximum of three times. A course is considered attempted when any one of the following grades is received – A, B, C, D, F, WP, WF, CS, P, R, AU. The highest grade received will be used in the computation of the student's grade point average. An academic program may have a more restrictive policy regarding the number of permissible attempts to fulfill a program requirement. Students should be aware that satisfactory academic progress requirements exist for students applying for or receiving financial aid and that repeated attempts of a course may have an undesirable effect on these satisfactory progress measures. Exception to the 3-attempt maximum may be granted if the student has not completed the course with a grade of A, B, or C and if the student provides documented evidence of mitigating circumstances, academic intervention which increases the likelihood of success in the course, or three year break in enrollment. Petition for exceptions should be directed to the Executive Officer of Student Services or designee.

GRADING SYSTEM

CURRICULUM/CREDIT COURSES. The measure of a student's overall academic performance for courses attempted at the College and with a course number greater than or equal to 100 shall be a grade point average (GPA) based on a 4.0 scale.

Students enrolled in the Associate Degree Nursing (ADN) program are required to achieve a numerical grade of 80 or above in NUR classes to progress to subsequent Associate Degree Nursing program courses.

Credits received for successful completion of developmental courses (courses with a course number less than 100) are included in the computation of attempted credits and earned credits but shall be excluded from all GPA computations.

Transfer credits and credits granted based on advanced placement processes shall also be excluded from all GPA computations.

The Executive Officer of Student Services or designee will ensure that the grade system and the processes used for record keeping purposes comply with college policy.

Grades listed below are calculated into all grade point average (GPA) computations. Developmental grades (courses below 100 level) are not calculated in computing the grade point average (GPA).

Grading System

Grade	Description	Grade Points per Credit Hour	
A	Excellent	4	Numerical grade of 90-100
B	Above Average	3	Numerical grade of 80-89
C	Average	2	Numerical grade of 70-79
D	Below Average	1	Numerical grade of 60-69
F	Failed	0	Numerical grade below 60
WF	Withdrew Failing	0	Numerical grade below 60

Grades listed below are not calculated into grade point average (GPA) computations.

Grading System

Grade	Description
AP	Credit by Exam/Other Proficiency Assessment
AU	Audit
CS	Continued Study
I	Incomplete
NC	*Non-Course Credit by Exam/Other Proficiency Exam
NG	No Grade
P	Passed
R	Re-enroll
R/Grade (i.e. RA)	Repeat (see note below)
TR	Transfer Credit
WP	Withdraw Passing

*Non-course credits awarded prior to 2002-2003 may be recorded as AP.
NOTE: Repeated courses are graded with the letter grade actually earned for the course preceded by an "R".

GRADE POINT AVERAGE. How To Calculate GPA.

The measure of a student's overall academic performance at the college shall be a grade point average (GPA) based on a 4.0 scale. **The computation of GPA includes only those courses completed at CVCC numbered 100 or higher and for which a grade of A, B, C, D, F, or WF is received.** (See also Repeat Policy).

The GPA may be calculated in the following manner:

1. Determine Total Hours Attempted. (Hours attempted are equal to the number of credit hours assigned to a course as shown on your CVCC transcript.)

2. Determine Total Grade Points Earned. The grade point value for a course is multiplied by the number of attempted credit hours for the course.

For Example: A grade of "A" is earned in ENG 111. A grade of "A" carries a value of 4 credit hours: 4 x 3 = 12. In this example, 12 grade points were earned for ENG III.

3. Divide the Total Grade Points Earned by the Total Hours attempted to determine Cumulative GPA.

Example:

Course	Hours Attempted	Grade Earned	Grade Points Earned
BIO 168	4	A	16 (4 x 4 = 16)
ART 111	3	C	6 (2 x 3 = 6)
ACA 111	1	B	3 (1 x 3 = 3)

Total Grade Point Earned = 25
Total Hours Attempted = 8
25 divided by 8 = 3.125

INCOMPLETES. A grade of "I" (Incomplete) may be given under extenuating circumstances to be determined by the instructor of the course. A grade of I must be replaced with the final course grade by the end of the subsequent semester unless approval is granted by the dean of instruction for continuation of the incomplete for one additional semester. Otherwise, the grade of "I" changes to an "F". A grade of WP or WF cannot be used to replace a grade of "I".

DEVELOPMENTAL COURSES. Developmental courses are curriculum courses with a course number less than 100. Students who successfully complete developmental courses will earn grades of "A," "B," "C", or "P" depending upon the level of acquired competence. Students who fail to complete developmental course requirements by the end of the grading period for the course will be assigned a grade of "CS" or "R". Students who receive a "CS" or "R" must register for the developmental course again and pay tuition and fees again.

Developmental course credit does not count toward graduation requirements. In addition, developmental course grades are excluded from GPA calculations.

WITHDRAWALS. When a student is unable to maintain regular attendance as defined by the syllabus for a class, either the student or instructor may initiate the process to withdraw the student from class membership. If such action occurs on or before the 50% point of the class, the student's grade shall be WP (Withdrawal Passing) unless the instructor issues a grade of WF (Withdrawal Failing) based on extenuating circumstances. If such action occurs after the 50% point of the class, the student's grade shall be a WF (Withdrawal Failing) unless the instructor authorizes a WP based upon appropriate circumstances. The student's grade is recorded on the student's permanent record. To withdraw from class membership, either the student or instructor submits an add/ withdrawal form to the Student Records Office.

CONTINUING EDUCATION COURSE GRADE. For continuing education courses, a grade of S signifies satisfactory progress and a grade of U designates unsatisfactory progress. Grades earned in continuing education courses are not included in GPA calculations.

ACADEMIC SANCTIONS AND DUE PROCESS

STUDENT ADVOCATE. Students may contact the Director of Admissions for assistance regarding academic problems and/or concerns. The Director of Admissions (or designee) will work with the student, instructors, academic supervisors, and other College resources to identify and implement the best available solution to academic problems and/or concerns.

ACADEMIC SANCTIONS. When a student's cumulative grade point average is based upon 12 or more credit hours and is less than a 2.0, the student shall be placed on academic probation. The Executive Officer of Student Services or designee shall be responsible for notifying the student and for establishing procedures to ensure the student receives academic counseling. A student who remains on academic probation for two consecutive semesters may be suspended from CVCC for one semester. Certain programs may establish additional academic progress requirements and impose sanctions for failure to meet those requirements. The Vice President of Instruction shall ensure any additional academic requirements and potential sanctions for failure to meet those requirements are communicated to students in those programs.

Students may appeal their academic suspension to the Executive Officer of Student Services. In the appeals process, students must present justification for appealing their suspensions. The appeals process may result in a reduced course load, and/or other appropriate action, or suspension for one (1) semester.

In addition to academic probation, other academic sanctions may be imposed on students enrolled in certain health sciences programs. Students applying for or admitted to these programs should contact their faculty advisor for further information.

ACADEMIC DISHONESTY. Students at CVCC are expected to be honest in all academic pursuits, whether class, lab, shop, or clinical. Acts of academic dishonesty are considered unethical and subject to behavior sanctions. Examples of academic dishonesty include, but are not limited to the following:

a. Sharing information about the content of quizzes, exams, classroom/lab/shop/clinical assignments (scheduled or make-up) without approval of the instructor including but not limited to unauthorized copying, collaboration, or use of notes, books, or other materials when preparing for or completing examinations or other academic assignments (scheduled or make-up).

b. Buying, selling, or otherwise obtaining a copy of a quiz, exam, project, term paper, or like document, without approval of the instructor.

c. Plagiarism, which is defined as the intentional representation of another person's work, words, thoughts, or ideas (from any source) as one's own.

d. Failing to follow approved test taking procedures by performing such acts as the following:
   • Looking on another student's test
   • Use of unauthorized notes; written, electronic, or otherwise
   • Changing answers after exam is scored
   • Verbal, non-verbal, or electronic communication with another student during an exam.

Instructors have the authority to impose either a warning, probation, or dismissal from the class for acts of academic dishonesty relative to classes under their supervision.

Students have an obligation to report any acts of academic dishonesty to the instructor or appropriate campus authority when reasonable grounds exist for such a report. Students also have a responsibility to cooperate in the investigation of any alleged acts of academic dishonesty. Failure to report acts of academic dishonesty could result in a behavior sanction.

ATTENDANCE SANCTIONS. Instructors have the responsibility and authority to establish and enforce attendance requirements for their classes. An instructor may withdraw a student from class when the instructor believes that the student's absences are excessive or that the student does not intend to pursue the learning activities of the class. In justifiable cases, instructors have the prerogative to re-admit a student to class membership when the withdrawal process was initiated by the instructor.

VETERANS BENEFITS AND STUDENT FINANCIAL AID. The College complies with the Standards of progress for Veterans certified for education benefits. Under such standards students will no longer be certified for benefits or aid if placed on academic probation for two successive semesters. Eligibility may be reestablished after one semester of satisfactory progress on a minimum of six or more credit hours.

REQUIREMENTS FOR GRADUATION

GENERAL REQUIREMENTS. The student is responsible for officially applying to Student Services for his/her degree, diploma, or certificate according to guidelines established by the Executive Officer of Student Services. Graduation applications and specific deadlines are available in Student Services and on the web-site at cvcc.edu/Student_Services/Student_Records/Graduation.cfm. A graduation fee is due when the application for graduation is submitted. (See Fees and Insurance.) This fee applies regardless of any election by the student not to participate in commencement. Students who apply for graduation and then fail to meet graduation criteria must reapply for graduation, and may be required to resubmit the fee.

The student is responsible for determining and fulfilling all requirements for the program of study from which he/she expects to graduate. Minimum credit hours and the required courses for each program have been established and are listed in the Program Listings section of the CVCC General Catalog. A minimum graduation requirement of all curriculum programs is a cumulative grade point average of 2.00 or a program grade point average of 2.00. Certain programs may have additional requirements. Students should consult the Advising Center or their advisor for information on program and graduation requirements.

The catalog of record is the catalog that is current at the time a student enrolls at CVCC in his/her program of study. If a student changes his/her program of study, then the catalog of record becomes the catalog that is current at the time of that change of program. To graduate under a program of study, a student must meet the requirements of his/her catalog of record or any catalog in effect within the next five years as long as the student has been continuously enrolled. If a student breaks enrollment for one academic year (fall and spring consecutively), the catalog of record will become the catalog that is current at the time of re-entry. From that point of reentry, the rule of continuous enrollment will apply. The program faculty or the registrar have/has the authority to choose a catalog, within a five year period of continuous enrollment, that best suits the student's needs for his/her particular program of study at the time of graduation. Exceptions to this policy must be approved by Vice President of Instruction or designee(s).

To be eligible for graduation, the applicant must also fulfill all financial obligations to the College.

Candidates for graduation from associate degree and diploma programs are expected to participate in the commencement exercises. Request for exceptions may be made to the Executive Officer of Student Services or designee.

RESIDENCE REQUIREMENTS. Students graduating from Catawba Valley Community College must enroll in and complete at CVCC a minimum of 35% of the semester hours required for their program of study (credits granted through transfer credit and advanced placement credit processes may not be used to satisfy this requirement). The final fifteen credit hours of study prior to graduation must be completed at CVCC unless special permission is obtained through the Chief Executive Officer of Student Services or designee.

As a Servicemembers Opportunity College (SOC) institution, CVCC recognizes the following for active-duty service-members: An SOC institution limits academic residency requirements for active-duty service-members to no more than 25 percent of the undergraduate degree program; recognizes all credit course work offered by the institution as applicable in satisfying academic residency requirements; and allows service-members to satisfy academic residency requirements with courses taken from the institution at any time during their program of study, specifically avoiding any "final year" or final semester" residency requirement, subject to stated requirements in specific course areas such as majors.

EXIT INTERVIEW. Graduates are required to complete an online exit interview prior to receipt of diploma.

GRADUATING WITH HONORS AND HIGH HONORS.

Students graduating from a degree or diploma program of study with a final cumulative GPA greater than or equal to 3.80 will receive recognition in their permanent student record as graduating with "high honors."

Students graduating from a degree or diploma program of study with a final cumulative GPA greater than or equal to 3.50 and less than 3.80 will receive recognition in their permanent student record as graduating with "honors."

The student's cumulative GPA at the end of the most recent fall semester and the GPA ranges noted above will be used to determine which graduates will be recognized as graduating with "high honors" or "honors" during the May commencement ceremony.

"High honors and "honors" designation on the student's diploma will be based on their final term of enrollment at the time of graduation and the GPA at the end of that term. (For example, a student who is enrolled in the spring semester may be recognized as a graduate with either honors or high honors during the ceremony. The actual determination of honors will be evaluated at the end of the spring semester and will be based on their cumulative GPA. This may differ from the GPA that was used to recognize their status during the ceremony.

SEMESTER HONORS AND HIGH HONORS

At the conclusion of the fall and spring semesters, the CVCC President shall recognize those students who meet the following requirements for semester honors and high honors.

• Semester high honors: students who complete 6 or more credit hours (included in the computation of GPA) during the completed semester while earning a semester GPA greater than or equal to 3.80 on a 4.0 scale.
• Semester honors: students who complete 6 or more credit hours (included in the computation of GPA) during the completed semester while earning a semester GPA greater than or equal to 3.50 and less than 3.80 on a 4.0 scale.

STUDENT RECORDS AND TRANSCRIPTS

PRIVACY OF STUDENTS. The College protects the privacy of students in accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974 (the "Act"), as amended, enacted as section 444 of the General Education Provisions Act. A copy of the Federal Regulations setting out the requirements for the protection of the privacy of students under the act is available at Federal FERPA Regulations or in Student Services.

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

A student may exercise the right to inspect and review his/her education record by making written application to the Director of Student Records.

A student may request amendment(s) to his/her record under section 99.20 of the Act by contacting the Director of Student Records. The Director of Student Records will attempt to resolve the issue. If the student is not satisfied with the resolution offered by the Director of Student Records, then the student may commence formal student due process procedures.

The College does disclose education records to College officials, including faculty, who are determined to have a legitimate educational interest. Faculty/staff are considered to have a legitimate educational interest if they might reasonably need to access information to academically advise a student or assist the student in a transaction with the College. All full time faculty have access to the student database.

Upon request, the College may disclose directory information. Directory information means information contained in the education record of a

student which would not generally be considered harmful or an invasion of privacy if disclosed. The College has designated directory information to be the student's name, student ID photo, student ID number, address, institutionally assigned electronic mail address, telephone listing, date of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, enrollment status (full-time or part-time), degrees and awards received, and the most recent previous educational agency or institution attended. A student has the right to refuse to let the College designate any or all types of information about him/her as directory information. The student must notify the Director of Student Records in writing that he/she does not want any or all types of information about him/her designated as directory information prior to the first day of the semester.

Under the Act, the College may not disclose personally identifiable information to the parents of an "eligible student" without the written consent of the student unless the disclosure is to parents of a dependent student as defined in Internal Revenue Code. An "eligible student" means a student who is 18 years of age or is attending an institution of postsecondary education. Parents must provide appropriate tax return information documenting the dependent status of the student before disclosure will be made without the student's written consent.

COPIES OF ACADEMIC RECORD. The College will provide students with official copies of their CVCC transcripts. There is a fee of $5 for each CVCC transcript. Complete the "Transcript Request" form and submit it to the Business Office along with payment.

The college will provide students with personal and/or official copies of placement testing results and other testing administered by CVCC Testing Services. At this time there is no cost for this services. (TEAS and PSB Exam results may not be available through CVCC. Students receive a copy of this result at the time of their exam).

Student access to transcripts from other educational institutions is generally limited to visual access. CVCC does not provide students with file copies or photocopies of transcripts and/or test reports from other institutions. Proof of identity is required to obtain a transcript and/or test score report.

STUDENT RECORD RETENTION. CVCC maintains student records in accordance with the Records Retention and Disposition schedule approved for colleges in the North Carolina Community College System. This schedule was approved for colleges in the North Carolina Community College system in accordance with provisions of the General Statutes of North Carolina.

INTELLECTUAL PROPERTY RIGHTS

OWNERSHIP OF MATERIALS. The College retains the right to use student work produced as a part of class assignments for non-profit educational purposes.

WORKFORCE DEVELOPMENT
(CORPORATE/CONTINUING EDUCATION)

GENERAL INFORMATION

An important function of the College is to provide quality courses of continuing education for adults. The development of these courses is based upon community needs and interests.

Workforce Development provides life-long learning experiences that will help adults fulfill occupational, social and personal needs. It allows adults to achieve their fullest potential and effectiveness in a rapidly changing world of increasing knowledge, skill and understanding. Courses offered are helpful in achieving occupational goals, as well as increasing the quality of life. The diversity of these programs range from basic reading and writing skills to vocational and technical upgrading to cultural and personal enrichment.

CVCC also offers specialized services to the business, corporate, and industrial community.

ADMISSION

Admission to classes in the division is open to individuals 18 years of age or older. Individuals less than 18 years old who are high school graduates or whose high school class has graduated may also enroll in continuing education courses. High school juniors and seniors, sixteen years of age and older, may enroll with permission from high school officials. See general college admissions requirements for further details.

ATTENDANCE

Students are expected to attend class regularly. Individual attendance records are maintained and retained. Students must meet attendance requirements to receive recognition for the course. Some classes are offered in accordance with state guidelines which may require stricter attendance policies.

This policy also applies to continuing education courses for which CEUs or certifications are issued. Minimum attendance requirements are communicated to students. Failure to meet these requirements will result in a grade of U (unsatisfactory). Make-up of missed class time is not guaranteed but may be permitted, within a specified timeline, in documented emergency situations with approval of the faculty, program director and within state auditing guidelines.

CLASS LOCATIONS

While a number of classes are held on CVCC East and Main campuses, as well as the Alexander Center for Education in Taylorsville, others are conducted at various locations in surrounding communities or within a particular business or industry throughout the area served by CVCC.

CLASS SCHEDULE

Classes are scheduled continuously throughout each semester. Special business seminars and industrial courses may be scheduled to begin at any time period appropriate to a company and CVCC. For specific announcements of course offerings, registration dates, and locations check the website: http://cce.cvcc.edu.

CONTINUING EDUCATION UNITS (C.E.U.)

The Southern Association of Colleges and Schools, of which CVCC is an accredited member, has recommended that the Continuing Education Unit (C.E.U.) be used as the basic instrument of measurement for a student's participation in an institution's offering of non-credit classes, courses, and programs. The C.E.U. is a unit measure. One C.E.U. is defined as ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction. Continuing Education Units may be offered for CVCC courses that are applicable to professional certification or license renewal.

COURSE COMPLETION

Certificates are given for the satisfactory completion. Requests for enrollment verification or course transcript should be directed to the Workforce Development Business Office located at the East Campus.

FEES

Occupational Extension course fees are on a graduated scale as outlined in the fee schedule on page 15. Other Self-Supporting course fees vary. Fees may be waived in compliance with North Carolina Statutes, as specified under fee waivers. There are no registration fees for enrollees in Basic Skills Education. Other costs in continuing education classes may include textbooks, equipment, tools, or other specific fees.

INTELLECTUAL PROPERTY RIGHTS

OWNERSHIP OF MATERIALS. The College retains the right to use student work produced as a part of class assignments for non-profit educational purposes.

MINIMUM ENROLLMENT REQUIRED

Normally, a course may be offered when a minimum of 10-15 persons enroll for the subject. The College reserves the right to cancel any course when an insufficient number of people register.

TO ENROLL

Individuals interested in enrolling must register and prepay by mail, telephone, fax, or visiting the CVCC East Campus or Alexander Center for Education. Applicants are registered on a first-come, first-served basis.

WORKFORCE DEVELOPMENT (PROGRAM OFFERINGS)

BASIC SKILLS EDUCATION PROGRAMS

Basic Skills Education covers the four main program areas: Adult Basic Skills, Compensatory Education, English as a Second Language, and GED. Basic Skills Education is an instructional program designed to assist adults 18 years of age or older who need academic remediation. Emphasis is placed on assisting the adult in reaching a higher education level.

Classes are organized and designed to assist individual student's efforts to reach an intermediate level where individualized study is possible. As the student gains competency in subject areas, a greater scope of subjects is introduced. As he or she progresses, greater emphasis is placed on self-paced individualized study for advancement. Each person receives assistance in selecting the correct level from which to begin his/her studies.

After gaining competency in subject areas, the adult will be encouraged to enroll in the High School Equivalency Program (GED). Currently, Basic Skills Education classes are available on campus and at various locations throughout Catawba and Alexander counties. Additional information may be obtained by contacting the Basic Skills office at 828-327-7000, ext. 4353.

ADULT BASIC EDUCATION (ABE)

The Adult Basic Education program teaches basic skills to help adults survive in an adult world. Instruction is designed to assist individuals to learn to read, to improve reading, math, and writing skills. Classes are available both on campus and at a number of off-campus locations for all program areas. Please call the Basic Skills office for further information at 828-327-7000, ext. 4353.

COMPENSATORY EDUCATION (CED)

Instruction designed for adults who have intellectual disabilities or who have suffered a brain injury. These classes assist students in learning basic functional and literacy skills as a means to improve their level of daily independent living. Classes are available at both the East Campus (828-327-7000, ext. 4268) and the Alexander Center for Education (828-632-8221, ext. 304).

ENGLISH AS A SECOND LANGUAGE (ESL)

English as a Second Language is a program of instruction designed for adults with limited English skills. Information covered throughout the course will include survival language, health and safety information, dealing with cultural differences, occupational language, U.S. history and legal information, and citizenship requirements. Emphasis is placed on conversational skills. Additional information may be obtained by contacting the Basic Skills Office at 828-327-7000, extension 4353. Classes are offered on and off campus.

HIGH SCHOOL EQUIVALENCY (GED)

To qualify for the GED High School Equivalency Diploma, an individual must satisfactorily complete the Tests of General Education Development (GED) for which CVCC is an official testing center. These tests are designed to measure a person's knowledge and skill in five areas. Test 1, measures the ability to use correct and effective English in written form. Test 2, 3, & 4, measure the ability to read, understand, and interpret materials in social studies, natural sciences, and literature. Test 5 measures the ability and to solve problems in mathematics.

ELIGIBILITY requirements to take the tests stipulate that an individual must be (1) 18 years of age or older, (2) out of high school at least six months, (3) a resident of North Carolina, and (4) have a definite vocational or educational goal. Minors 16 and 17 years of age may take the tests only with the written permission of the superintendent of the school district in which the individual resides. Prior to taking the official GED tests, new students must attend either a two-day, day or night orientation. Please call 828-327-7000, extension 4353 for information.

Classes are available prior to taking the GED test. CVCC offers these courses and encourages preparation through informal classroom settings as well as in the GED laboratory on campus. Classes are available on campus and at various locations throughout Catawba and Alexander counties. Online preparation is also available after orientation.

Each person planning to take the GED tests must complete an application form prior to the date on which the tests are taken. Proper identification must be presented when completing the application and when taking each examination. Acceptable identification includes a valid North Carolina driver's license or North Carolina identification card. To take the GED test, appointments must be made in advance. Additional information may be obtained by contacting the Testing Center.

COMPUTRAIN

CVCC's Corporate Computer Training Center provides professional development courses in the most current versions of software applications used by area businesses. These short, one-day, six-hour-per-day courses are designed for employees who need to become more productive in the shortest time possible with practical hands-on experience in a Windows and LAN environment. COMPUTRAIN will also design short courses to meet a company's specific personal computer application needs, to be held on CVCC's campuses or at a company's computer lab.

For more information, contact the Director of COMPUTRAIN at 828-327-7000, Ext. 4330 or e-mail skillian@cvcc.edu.

CUSTOMIZED TRAINING

The Customized Training Program supports the economic development efforts of North Carolina by providing education and training services to ensure the presence of a well-trained workforce for new and existing business and industry to remain productive and profitable within the State. This Customized Training assistance supports full-time production and direct customer service positions created in the State of North Carolina, thereby enhancing the growth potential of companies located in the state while simultaneously preparing North Carolina's workforce with the skills essential to successful employment in emerging industries.

HUMAN RESOURCES DEVELOPMENT

The Human Resources Development Program (HRD) is designed to provide skill assessment services, employability skills training, and career development counseling to unemployed and underemployed adults. The courses shall address six core components as follows: Assessment of an individual's assets and limitations, positive self-concept, employability skills, communication skills, problem-solving skills and an awareness of the impact on information technology in the workplace. Students enrolling in HRD classes may be eligible for a fee waiver if they meet any of the following criteria: Unemployed, Received notice of lay-off, Working and eligible for Federal Earned Income Tax Credit (EITC), or Working and earning at or below 200% of federal poverty guidelines. For information about the HRD program call 828-327-7000, ext. 4370 or 4522. Or visit the HRD website: http//www.cvcc.edu/Learning_and_Personal_Enrichment/CEIC/HRD/index.cfm.

MANUFACTURING SOLUTIONS CENTER

The mission of the Manufacturing Solutions Center (MSC) is to help US Manufacturer's increase sales, improve quality and improve efficiency to create or retain jobs. This is accomplished by:

- Enhancing and improving products through research and development
- Assisting in creating prototypes for new, innovative offerings
- Analyzing new materials to enhance structure and programs
- Testing products for reliable content and quality
- Training personnel for lean manufacturing processes and supply chain efficiences
- Providing a forum for rollout of new 21st century technologies
- Providing hands-on guidance for international marketing and sales and military procurement
- Industry advocacy

OCCUPATIONAL EXTENSION COURSES

The College offers many vocational, technical, and business courses. The primary objectives of these courses are to (1) provide adults additional skills and/or knowledge applicable to the present occupation; (2) provide training for occupations in which skill and knowledge requirements are undergoing transition due to technological advances in equipment, materials, and machines; and (3) provide area businesses and industries assistance in meeting manpower needs through other specialized courses.

Occupational upgrading courses
are available in each of the following areas:

BUSINESS courses are available to a wide variety of business organizations, administration, management, sales, and secretarial occupations.

COMPUTER courses are also available in popular software applications currently used by local employers. Courses are also available to prepare students to take certification exams in networking such as PC Repair A+.

FIRE, RESCUE, & EMS training is offered for members of municipal, volunteer, industrial fire brigades, and rescue squads. EMT courses are available to the public. Entrance tests are required for certain courses.

HEALTHCARE TRAINING

Healthcare Occupation programs have been established for persons seeking initial or additional training in the medical field. All level courses from entry level to para-professional to professional are offered. Entrance tests required for certain classes.

Electronic Health Record Specialist Training programs have been established for persons seeking additional training in the medical field. CVCC offers the Health Systems Trainer Track and the Health Information Technology Technical/Software Support Specialist Track.

LAW ENFORCEMENT courses have been designed for law enforcement personnel in cooperation with training departments of agencies.

MANAGEMENT AND SUPERVISORY DEVELOPMENT are offered to improve supervisory and management techniques for experienced as well as beginning personnel.

PROFESSIONAL DEVELOPMENT FOR EDUCATORS courses are offered to assist teachers in meeting recertification requirements.

TECHNICAL courses are available for upgrading the skills and knowledge of persons working in the numerous technical and paraprofessional occupations.

VOCATIONAL UPGRADING courses are designed for persons working in skilled and semi-skilled occupations.

Additional information regarding occupational upgrading courses may be obtained by contacting the Workforce Development Office at the CVCC East Campus.

PERSONAL ENRICHMENT PROGRAMS

These programs are offered to individuals 18 years of age and older. These are short-term courses for self-improvement, cultural enrichment, and academic achievement. The program is intended to meet the growing needs and interests of the community. The purpose is to give an individual a chance to pursue special interests and to fill his/her leisure time with worthwhile educational projects. Some of these include conversational foreign languages, economics, government, consumer education, cake decorating, sign language, guitar, needlepoint, quilting, landscaping, dancing and personal development.

Normally, a course may be offered when a minimum of 10-15 individuals indicate interest. Additional information regarding these classes may be obtained by contacting the Workforce Development Office at 828-327-7037.

SMALL BUSINESS CENTER

The Small Business Center (SBC) is dedicated to increasing the success rate of all businesses in Alexander and Catawba counties. The Small Business Center offers Start-It seminars for budding entrepreneurs, as well as Grow-It seminars for more seasoned business owners. Seminar topics range from feasibility to product/service analysis to marketing, operations, management, and business finances. For help with business planning, the SBC director is available by appointment for one-on-one, confidential counseling. The SBC also maintains a resource library of print and electronic media for use in exploring business ownership. In keeping with its economic development mission, many services are delivered in conjunction with chambers of commerce, economic development offices, local business and merchant associations. The SBC also works closely with CVCC career instructors to help students learn how to start and operate a business once they have mastered the subject matter of their trade. To register for a seminar, contact the SBC Support Team at mbrown@cvcc.edu or call 828-327-7000, extension 4117. For a counseling appointment, contact the SBC Director at bsweetin@cvcc.edu or call 828-327-7000, extension 4112. Funded annually by grant with tax dollars, the SBC is one of 58 centers comprising the North Carolina Community College Small Business Center Network (SBCN).

PROGRAM LISTINGS
2012-2013

The following pages list alphabetically by discipline area, the curriculum programs to be offered by Catawba Valley Community College during the 2012-2013 academic year. Programs in addition to those shown are being planned and may be implemented prior to or during the year. Catawba Valley Community College reserves the right to delete or change programs and courses as may be required; however, this general catalog represents the most accurate information available concerning the CVCC curriculum at the time of its publication.

HOW TO USE THE LISTINGS
Each curriculum offered for credit is listed along with course numbers, titles, and semester hours of credit require for graduation. The credit hours shown in each curriculum are minimal, and are broken down as follows: class hours per week; lab hours per week; clinical/work experience hours per week (where applicable); and credit hours. Some courses entail both lab hours and clinical/work experience, and in these courses the number of hours for each is listed. Beginning on page 109 is a listing of descriptions for each credit course offered in each CVCC program. A complete course syllabus for each credit course is on file in the offices of the respective department chairpersons and is available for review by interested persons.

PROGRAM SEQUENCES
Program Sequences are suggestions only. The College retains the right to alter Program Sequences as it deems necessary.

COLLEGE TRANSFER

The College Transfer program is designed to parallel the freshman and sophomore years of study of a four-year college or university. In the first two years of college, students pursue a program of general education in the area of humanities, social and behavioral sciences, mathematics, and sciences.

Catawba Valley Community College provides advising to help students plan their program for transfer to the college of their choice. Students should structure their programs of study in conference with academic advisors, and admissions personnel at the college or university to which they wish to transfer. The structure of each student's program should be based on high school records, occupational goals, and choice of college to which the student plans to transfer.

COLLEGE TRANSFER

Associate in Arts Degree Curricula:
•Associate in Arts: General

Associate in Arts Diploma Curriculum:
• General Education Core

Associate in Science Degree Curricula:
•Associate in Science: General

Associate in Science Diploma Curriculum:
• General Education Core

Associate in Fine Arts Degree Curriculum:

• Pre-Major Associate in
Fine Arts: Drama

• Pre-Major Associate in Fine Arts:
Music & Music Education

Courses required to meet graduation requirements in this program are offered during day and evening hours.
Minimum time for completion:
Day -- four semesters full-time attendance;
Evening -- will vary according to semester load of student.
The Associate in Arts, Associate in Fine Arts, or Associate in Science Degree is awarded graduates of college transfer programs.
The Diploma may be awarded upon completion of the 44 hour general education core.

Comprehensive Articulation
Agreement (CAA)

The governing boards of the North Carolina Community College System and the University of North Carolina, in response to a legislative mandate, have approved a Comprehensive Articulation Agreement (CAA) which addressed in a system-wide manner the transfer of students from the community colleges to the universities. This CAA is for the A.A. and A.S. degrees. It specifies a general education transfer core of 44 semester hours and reflects the distribution of discipline areas commonly included in institution-wide, lower division, general education requirements for the baccalaureate degree. The transfer core specifies study areas and semester hours credit (SHC) distributions for each. The core specifically includes the following for the A.A. degree: English composition (6 SHC), humanities/fine arts (12 SHC), social/behavioral sciences (12 SHC), mathematics (6 SHC), and natural sciences (8 SHC). The core specifically includes the following for the A.S. degree: English composition (6 SHC), humanities/fine arts (9 SHC), social/behavioral sciences (9 SHC), natural science/mathematics (20 SHC--includes a minimum of 6 SHC in mathematics and 8 SHC in natural sciences). Community colleges and universities have identified community college courses appropriate to a general education transfer core. Those courses are listed in this section of the catalog.

The 44 hour General Education transfer core, if completed successfully with grade C or better in each course, will transfer as a block across the community college system and to UNC institutions. No D grades will transfer.

Community college graduates receiving the A.A. or A.S. degree who have successfully completed the general education transfer core will be considered to have fulfilled the institution-wide, lower division, general education requirements of the receiving UNC institution and will have achieved junior status. Completion of the A.A. or A.S. degree includes a Transfer Assured Admissions Policy (TAAP), which assures admission to at least one of the 16 University of North Carolina institutions with the following stipulations:

- Admission is not assured to a specific campus or specific program or major.
- Students must have graduated from a NC community college with an A.A. or A.S. degree.
- Students must meet all requirements of the CAA.
- Students must have an overall GPA of at least 2.0 on a 4.0 scale, as calculated by the college from which they graduated, and a grade of "C" or better in all CAA courses.
- Students must be academically eligible for readmission to the last institution attended.
- Students must meet judicial requirements of the institution to which they applied.
- Students must meet all application requirements at the receiving institution including the submission of all required documentation by stated deadlines.

In addition, students must meet the specific senior institution's foreign language and/or health and physical education requirements. These requirements, if applicable, may be completed prior to or after transfer to the senior institution. Also, 3 SHC in speech/communications can be substituted for 3 SHC in the humanities/fine arts requirements; however, speech/communications cannot substitute for the literature requirement in the humanities/fine arts category.

Community college students who have completed the 44 SHC general education core with the proper distribution of hours, but have not completed the associate degree, will be considered to have fulfilled the institution-wide, lower division general education requirements of the receiving UNC institution. To be eligible, a student must have an overall GPA of 2.0 on a 4.0 scale at the time of transfer and a grade of "C" or better on all general education core courses.

Community college students who have not completed the general education core will have their transcripts evaluated on a course-by-course basis by the receiving institution.

Mission Statement for the
General Education Program

The mission of the General Education Program is to develop solid reasoning skills and a background in the various disciplines upon which to base a program of lifelong learning. The skills to connect the world of the individual to the rest of the world will be important in preparing the student to become an effective citizen.

Goals and Competencies of
General Education Courses

Communication

The student will gain proficiency in reading, writing, speaking and comprehending Standard English. The student will be able to communicate effectively in all three areas.

Mathematics

The student will gain proficiency in basic computational skills, fundamental algebraic concepts, and interpretational skills of numerical and graphical data as these skills apply to real world situations.

Arts and Humanities

The student will gain an appreciation of the aesthetic aspect of human existence and how human expression in this area gives insight into the foundations of the basic questions of value in human life.

Social and Behavioral Sciences

The student will gain an understanding of the dynamics of the physiological and psychological self, group and societal interaction, and have an introduction to the influences of past events on the present. Further, the student will gain the necessary application and communication skills to utilize this knowledge in future academic and vocational pursuits.

Natural Science

The student will be introduced to the methods, concepts, and principles of science; will be exposed to representative applications of science and how these affect our society; and will experience the gathering, organization and interpretation of data.

Foreign Languages

The student will gain an understanding of foreign culture, cultural diversity, and language skills necessary for reading and speaking the language.

ASSOCIATE IN ARTS DEGREE

Associate in Arts degree is recommended for students who plan to transfer to senior colleges and universities to pursue programs of study in Business Administration, Education, Liberal Arts, or any other area leading to the Bachelor of Arts Degree.

Associate in Arts Degree candidates must complete the following requirements:

Courses	Semester Hour Credit
I. General Education Core (44 SHC)	**44**

English Composition (6 SHC)
ENG 111, and ENG 112 or 113

Humanities/Fine Arts (12 SHC)
Required-three (3) hours in literature to be selected from: ENG 231, 232, 241, 242, 251, 252, and a total of nine (9) hours from at least two different areas: Art, Drama, Language, Humanities, Music, Philosophy, Religion, or Speech.

Social/Behavioral Sciences (12 SHC)
Required-three (3) hours in history selected from: HIS 111, 112, 121, 122, 131, 132 and a total of nine (9) hours from courses listed below. Courses must be selected from at least two different areas: Anthropology, Economics, Geography, Political Science, Psychology, or Sociology.

Natural Sciences (8 SHC)
Two semesters of Laboratory Science courses to be selected from: Astronomy, Biology, Chemistry, Geology, or Physics.

Mathematics (6 SHC)
MAT 140/140A or Higher Level College Transfer Courses.

II. Other Required Hours (21 SHC)	**21**

ACA 111 or ACA 122

1 Hour
Computer Intensive Course

3-4 Hours
    CIS 110 or CIS 115
    CSC 120, CSC 134, CSC 139, or CSC 151
    MAT 151 and MAT 151A
    PHY 151 or PHY 251

* Electives 16 - 17 Hours
(* Recommended to be taken in Liberal Arts area and/or cognate areas to the major.)

Total	**65**

Students who plan to transfer to a senior institution should determine the physical education and language requirements of the institution they plan to attend. Although Catawba Valley Community College does not have a physical education or language requirement, many senior institutions do have one or both requirements, and courses should be taken during the freshman and sophomore years.

ASSOCIATE IN ARTS GRADUATION REQUIREMENTS

I. General Education Core   (44 SHC)

A. English Composition (6 SHC).
    ENG 111, and ENG 112, ENG 113, or ENG 114

B. Humanities/Fine Arts (12 SHC).
Choose four courses from three different prefix areas. One course must be ENG.

ARA 111	DRA 122	GER 111	REL 110
ARA 112	DRA 126	GER 112	REL 211
ART 111	ENG 231	HUM 110	REL 212
ART 114	ENG 232	HUM 120	REL 221
CHI 111	ENG 241	HUM 211	SPA 111
CHI 112	ENG 242	HUM 220	SPA 112
COM 110	ENG 251	MUS 110	SPA 211
COM 120	ENG 252	MUS 112	SPA 212
COM 231	FRE 111	MUS 212	
DRA 111	FRE 112	MUS 213	
DRA 112	FRE 211	PHI 210	
DRA 115	FRE 212	PHI 240	

C. Social/Behavioral Sciences (12 SHC).

Three (3) SHC in history is required for the AA degree, selected from HIS 111, 112, 121, 122, 131, 132 and a total of nine (9) SHC from courses listed below. Courses must be selected from at least two (2) different areas:

Anthropology, Economics, Geography, Political Science, Psychology, or Sociology.

ANT 220	HIS 111	PSY 237
ANT 221	HIS 112	PSY 239
ANT 230	HIS 121	PSY 241
ECO 251	HIS 122	PSY 281
ECO 252	HIS 131	SOC 210
GEO 111	HIS 132	SOC 213
GEO 112	POL 110	SOC 220
GEO 113	POL 120	SOC 225
GEO 130	PSY 150	SOC 230

D. Natural Sciences (8 SHC).

AST 151	BIO 130	CHM 152	PHY 151
AST 151A	BIO 140	GEL 111	PHY 152
AST 152	BIO 140A	GEL 113	PHY 251
AST 152A	CHM 131	GEL 120	PHY 252
BIO 111	CHM 131A	GEL 230	
BIO 112	CHM 132	PHY 110	
BIO 120	CHM 151	PHY 110A	

E. Mathematics (6 SHC).

*Select courses from the following:

MAT 140	MAT 171	MAT 175A
MAT 140A	MAT 171 A	MAT 263
MAT 151	MAT 172	MAT 263A
MAT 151A	MAT 172 A	MAT 271
MAT 161	MAT 175	MAT 272
MAT 161A		MAT 273

* When choosing from the pre-calculus series select only one from each series: MAT 171/MAT 171A and MAT 172/MAT 172A; OR MAT 175/MAT 175A.

II. Other Required Hours   (21 SHC)
Computer Intensive Course
(One of the following)
    CIS 110 or CIS 115
    CSC 120, CSC 134, CSC 139, or CSC 151
    MAT 151 and MAT 151A
    PHY 151 or PHY 251

    ACA 111 or ACA 122

*Electives: 17 hours

(*Recommended to be taken in Liberal Arts area and/or cognate areas to the major.)

ASSOCIATE IN ARTS: GENERAL
A.A. Program (A10100)

GENERAL EDUCATION COURSES: **SHC**

English Composition:

ENG   111   Expository Writing 3

ENG   112   Argument-Based Research 3
     OR

ENG   113   Literature-Based Research 3

Humanities/Fine Arts:

English Literature Elective 3

Electives 9

Social/Behavioral Sciences:

History Elective 3

Electives 9

Natural Sciences/Mathematics:

Natural Sciences

   Electives 8

Mathematics

   MAT 140 Survey of Mathematics..3
     OR

   Higher Level College Transfer Math Course Elective 3
   (Enrollment in the accompanying lab course is strongly recommended.)

OTHER REQUIRED COURSES:

ACA   111   College Student Success...1
     OR

ACA   122   College Transfer Success...1

Computer Intensive Course..3-4

CIS   110   Introduction to Computers..3
     OR

CIS   115   Intro to Prog & Logic 3

CSC   120   Computing Fundamentals I..4

CSC   134   C++ Programming 3

CSC   139   Visual BASIC Prog...3
     OR

CSC   151   JAVA Programming 3

MAT   140A Survey of Mathematics Lab 1

MAT   151   Statistics 1...3
 and MAT 151A   Statistics I Lab...1

PHY   151   College Physics I...4
     OR

PHY   251   General Physics I...4

Electives 16
   (Recommended to be taken in Liberal Arts area from CAA electives.)

Total Credit Hours Required 65

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG   090   Composition Strategies..3

MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060,
    DMA 070, DMA 080 (Each One (1) credit hour) 1

RED   090   Improved College Reading.......................................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Electives For Associate In Arts Programs Of Study

ACC 120	CSC 130	
ACC 121	CSC 139	HIS 141
ARA 181	CSC 220	HIS 145
ARA 182	CSC 239	HIS 151
ART 130	CTS 115	HIS 161
ART 131	DAN 110	HIS 162
ART 132	DAN 124	HIS 211
ART 140	DAN 125	HIS 221
ART 171	DAN 130	HIS 226
ART 231	DAN 140	HIS 227
ART 232	DAN 141	HIS 228
ART 240	DAN 211	HIS 232
ART 241	DAN 212	HIS 236
ART 271	DAN 225	HIS 261
ART 274	DAN 264	JOU 110
ART 281	DFT 170	MAT 285
ART 282	DRA 115	MUS 111
ART 283	DRA 120	MUS 113
ART 284	DRA 130	MUS 210
BIO 143	DRA 132	MUS 211
BIO 145	DRA 135	MUS 214
BIO 146	DRA 140	MUS 215
BIO 155	DRA 142	PED - Any
BIO 163	DRA 145	PHS 130
BIO 168	DRA 150	PHY 153
BIO 169	DRA 170	PHY 253
BIO 175	DRA 171	POL 130
BIO 221	DRA 240	PSY 211
BIO 222	DRA 260	PSY 231
BIO 224	DRA 270	PSY 243
BIO 225	DRA 271	PSY 244
BIO 226	EDU 144	PSY 245
BIO227	EDU 145	PSY 246
BIO 230	EDU 216	PSY 247
BIO 231	EDU 221	PSY 263
BIO 232	EGR 150	PSY 275
BIO 250	EGR 210	SOC 215
BIO 275	EGR 220	SOC 234
BIO 280	ENG 125	SOC 242
BUS 110	ENG 126	SOC 244
BUS 115	ENG 235	SOC 250
BUS 137	ENG 273	SOC 254
CHI 181	ENG 275	SPA 141
CHI 182	FRE 181	SPA 161
CHM 130	FRE 182	SPA 181
CHM 130A	FRE 281	SPA 182
CHM 251	FRE 282	SPA 221
CHM 252	GEL 220	SPA 281
CHM 261	GEO 121	SPA 282
CHM 263	GER 181	
CHM 271	GER 182	
CHM 271A	HEA 110	
CJC 111	HEA 112	
CJC 121	HEA 120	
CJC 141		

ASSOCIATE IN SCIENCE DEGREE

The Associate in Science Degree is recommended for students who plan to transfer to senior colleges and universities to pursue programs of study in Agriculture, Dentistry, Engineering, Forestry, Furniture, Mathematics, Medicine, Science, Textiles, or other areas leading to a Bachelor of Science Degree.

Associate in Science Degree candidates must complete the following requirements:

Courses	Semester Hour Credit
I. General Education Core (44 SHC)	**44**
Communication	**(6 SHC)**

ENG 111, and ENG 112, ENG 113 or ENG 114

Humanities/Fine Arts (9 SHC)

Required-three (3) hours in literature to be selected from:
ENG 231, 232, 241, 242, 251, 252, and a total of six (6) hours from at least two different areas:
Art, Drama, Language, Humanities, Music, Philosophy, Religion, or Speech.

Social/Behavioral Science (9 SHC)

Required-three (3) hours in history selected from:
HIS 111, 112, 121, 122, 131, 132 and a total of six (6) hours from courses listed below.
Courses must be selected from at least two different areas:
Anthropology, Economics, Geography, Political Science, Psychology or Sociology.

Natural Science/Mathematics (20 SHC)

   Natural Sciences (8 SHC)

A two semester laboratory science course sequence of eight (8) hours in Biology, Chemistry, or Physics.

   Mathematics (8 SHC)

MAT 171/171A and MAT 172/172A or MAT 175/175A or MAT 271; and Required Four (4) Hour MAT Elective.
   Additional 4 SHC in Mathematics or Natural Sciences.

II. Other Required Hours (21 SHC)	**21**
ACA 111 or ACA 122	

1 Hour

Natural Science Electives and/or

4 Hours
   CSC 120, 130, 134, 220; DFT 170; OR
   EGR 220.
   Computer Intensive Course

3 Hours
   CIS 110
   CSC 120; CSC 134; or CSC 151
   MAT 151 and MAT 151A
   PHY 151 or PHY 251
   Electives

13 Hours

Total	**65**

Students who plan to transfer to a senior institution should determine the physical education and language requirements of the institution they plan to attend. Although Catawba Valley Community College does not have a physical education or language requirement, many senior institutions do have one or both requirements, and courses should be taken during the freshman and sophomore years.

ASSOCIATE IN SCIENCE GRADUATION REQUIREMENTS

I. General Education Core (44 SHC)

  A. Communication (6 SHC)
    ENG 111, and ENG 112, ENG 113 or ENG 114

  B. Humanities/Fine Arts (9 SHC).
    Choose three (3) courses from three different prefix areas.
    One course must be ENG.

ARA 111	DRA 115	FRE 211	MUS 213
ARA 112	DRA 122	FRE 212	PHI 210
ART 111	DRA 126	GER 111	PHI 240
ART 114	ENG 231	GER 112	REL 110
CHI 111	ENG 232	HUM 110	REL 211
CHI 112	ENG 241	HUM 120	REL 212
COM 110	ENG 242	HUM 211	REL 221
COM 120	ENG 251	HUM 220	SPA 111
COM 231	ENG 252	MUS 110	SPA 112
DRA 111	FRE 111	MUS 112	SPA 211
DRA 112	FRE 112	MUS 212	SPA 212

  C. Social/Behavioral Sciences (9 SHC).

    Choose three (3) courses, a total of nine (9) SHC, from three (3) different prefix areas. One (1) must be History for AS degree.

ANT 220	GEO 130	POL 120	SOC 220
ANT 221	HIS 111	PSY 150	SOC 225
ANT 230	HIS 112	PSY 237	SOC 230
ECO 251	HIS 121	PSY 239	
ECO 252	HIS 122	PSY 241	
GEO 111	HIS 131	PSY 281	
GEO 112	HIS 132	SOC 210	
GEO 113	POL 110	SOC 213	

A total of 20 SHC must be in Natural Sciences or Mathematics.

  D. Natural Sciences (8 SHC). Two (2) semester sequence.
    BIO 111 & BIO 112, or CHM 151 & CHM 152,
    or PHY 151 & PHY 152 , or PHY 251 & PHY 252.

*You may choose from the following to complete your Natural Sciences or Mathematics electives.
AST 151 & AST 151A, AST 152, AST 152A, BIO 111, BIO 112, BIO 120, BIO 130, BIO 140 & BIO 140A, CHM 131, & CHM 131A, CHM 132, CHM 151, CHM 152, GEL 111, GEL 113, GEL 120, GEL 230, PHY 110 & PHY 110A, PHY 151, PHY 152, PHY 251, PHY 252.   .

  E. Mathematics (8 SHC). MAT 171 and MAT 172 or MAT 175 or MAT 271; and required four (4) hour MAT elective. Select courses from the following:

MAT 151	*MAT 172	MAT 271
MAT 151A	MAT 172A	MAT 272
*MAT 171	*MAT 175	MAT 273
MAT 171A	MAT 175A	

    * Select only one: MAT 171 and MAT 172; or MAT 175.

II. Other Required Hours	(21 SHC)
ACA 111 or ACA 122	1 SHC
Natural Science Electives and/or	4 SHC

CSC 120, 130, 134, 220; DFT 170; EGR 220; or GEL 113.

Computer Intensive Course	(3 SHC)

CIS 110
CSC 120, CSC 134, or CSC 151
MAT 151 and MAT 151A
PHY 151 or PHY 251

Electives:	13 SHC

Associate in Science: General
A.S. Program (A10400)

GENERAL EDUCATION COURSES: **SHC**

English Composition:

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
		OR	
ENG	113	Literature-Based Research	3
		OR	
ENG	114	Prof Reasearch & Reporting	3

Humanities/Fine Arts:

English Literature Elective	3
Electives	6

Social/Behavioral Sciences:

History Elective	3
Electives	6

Natural Sciences/Mathematics:

Natural Sciences

Electives 8

One (1) set of courses (8 SHC) from the following is required:

BIO	111	General Biology I	4
BIO	112	General Biology II	4
CHM	151	General Chemistry I	4
CHM	152	General Chemistry II	4
PHY	151	College Physics I	4
PHY	152	College Physics II	4
PHY	251	General Physics I	4
PHY	252	General Physics II	4

Mathematics

MAT	171	Precalculus Algebra	3
MAT	172	Precalculus Trigonometry	3
		OR	
MAT	175	Precalculus	4
		OR	
MAT	271	Calculus I	4

(Enrollment in the accompanying lab course is required. See Other Required Hours.)

Natural Sciences/Mathematics Electives 6

OTHER REQUIRED COURSES:

ACA	111	College Student Success	1
		OR	
ACA	122	College Transfer Success	1
MAT	171A	Precalculus Algebra Lab	1
MAT	172A	Precalculus Trig Lab	1
		OR	
MAT	175A	Precalculus Lab	1

Computer Intensive Elective 3

Three (3) SHC from the following are required:

CSC	120	Computing Fundamentals I	4
CSC	134	C++ Programming	3
CSC	151	JAVA Programming	3
MAT	151	Statistics I	3
MAT	151A	Statistics I Lab	1
PHY	151	College Physics I	4
PHY	251	General Physics I	4

Mathematics, Natural Sciences, or Computer Science Electives 11

One (1) of the following courses is recommended:

CSC	120	Computing Fundamentals I	4
CSC	130	Computing Fundamentals II	4
CSC	134	C++ Programming	3
CSC	220	Machine Implem of Algor	4
DFT	170	Engineering Graphics	3
EGR	220	Engineering Statics	3

Electives 4

(Recommended to be taken from Natural Sciences, Mathematics, or other courses that fit educational goals.)

Total Credit Hours Required 65

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG	090	Composition Strategies	3
MAT		DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 (Each One (1) credit hour)	1
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Electives For Associate In Science Programs Of Study

ACC 120	DFT 170	HIS 261
ACC 121	DRA 115	JOU 110
ARA 181	DRA 120	MAT 285
ARA 182	DRA 130	MUS 111
BIO 143	DRA 132	MUS 113
BIO 145	DRA 135	MUS 210
BIO 146	DRA 140	MUS 214
BIO 155	DRA 142	MUS 215
BIO 163	DRA 145	PED - Any
BIO 168	DRA 150	PHS 130
BIO 169	DRA 170	PHY 153
BIO 175	DRA 171	PHY 253
BIO 221	DRA 240	POL 130
BIO 222	DRA 260	PSY 211
BIO 224	DRA 270	PSY 231
BIO 225	DRA 271	PSY 243
BIO 226	EDU 144	PSY 244
BIO 227	EDU 145	PSY 245
BIO 230	EDU 216	PSY 246
BIO 231	EDU 221	PSY 247
BIO 232	EGR 150	PSY 263
BIO 250	EGR 210	PSY 275
BIO 275	EGR 220	SOC 215
BIO 280	ENG 125	SOC 234
BUS 110	ENG 126	SOC 242
BUS 115	ENG 235	SOC 244
BUS 137	ENG 273	SOC 250
CHM 130	ENG 275	SOC 254
CHM 130A	FRE 181	SPA 141
CHM 251	FRE 182	SPA 161
CHM 252	FRE 281	SPA 181
CHM 261	FRE 282	SPA 182
CHM 263	GEL 220	SPA 221
CHM 271	GEO 121	SPA 281
CHM 271 A	GER 181	SPA 282
CHI 181	GER 182	
CHI 182	HEA 110	
CJC 111	HEA 112	
CJC 121	HEA 120	
CJC 141	HIS 141	
CSC 130	HIS 145	
CSC 139	HIS 151	
CSC 220	HIS 161	
CSC 239	HIS 162	
CTS 115	HIS 211	
	HIS 221	
	HIS 226	
	HIS 227	
	HIS 228	
	HIS 232	
	HIS 236	

ASSOCIATE IN FINE ARTS DEGREE (Drama)

The Associate in Fine Arts Degree is recommended for students who plan to transfer to senior institutions to pursue programs in the arts that lead to degrees of Bachelor of Fine Arts, Bachelor of Arts, Bachelor of Science in Art Education. Associate in Arts Degree candidates must complete the following requirements:

	SHC
I. General Education Core (28 SHC)	**28**

Communication (6 SHC)
ENG 111, ENG 113

Humanities/Fine Arts (6 SHC)
Required-three (3) hours in literature to be selected from:
ENG 231 or ENG 232, or ENG 241, or ENG242 and three (3) hours from one of the following:
Art, Communication, Drama, Language, Humanities, Philosophy, or Religion.

Social/Behavioral Science (9 SHC)
Required-three (3) hours in History, three (3) hours in Psychology, and three (3) hours in Sociology.

Natural Sciences (4 SHC)
Required-four (4) hours of Astronomy, Biology, Chemistry, Geology, or Physics.

Mathematics (3 SHC)
MAT 140-Higher Level College Transfer Courses.

II. Other Required Hours (37 SHC)	**37**
Mathematics Lab	1 Hour
Professional Program Courses	32 Hours
Drama Electives	3 Hours
ACA Eletive	1 Hour
Total	**65**

Students who plan to transfer to a senior institution should determine the physical education and language requirements of the institution they plan to attend. Although Catawba Valley Community College does not have a physical education or language requirement, many senior institutions do have one or both requirements, and courses should be taken during the freshman and sophomore years.

ASSOCIATE IN FINE ARTS DEGREE GRADUATION REQUIREMENTS

I. General Education Core (28 SHC)
   A. Communication (6 SHC)
      ENG 111 and ENG 113
   B. Humanities/Fine Arts (6 SHC).
      Required three (3) hours of literature (ENG 231, 232, 241, or 242) and select one three (3) hour course from the following:

ART 111	DRA 112	HUM 211	REL 110
ART 114	DRA 115	MUS 110	REL 211
COM 110	DRA 122	MUS 213	REL 212
COM 231	DRA 126	PHI 210	REL 221
DRA 111	HUM 110	PHI 240	

   C. Social/Behavioral Sciences (9 SHC).
      Select three (3) hours in History, three (3) hours in Psychology, and three (3) hours in Sociology.

ANT 220	GEO 112	HIS 122	PSY 150
ANT 230	GEO 130	HIS 131	SOC 210
ECO 251	HIS 111	HIS 132	SOC 213
ECO 252	HIS 112	POL 110	SOC 220
GEO 111	HIS 121	POL 120	SOC 225

   D. Natural Sciences (4 SHC).

AST 151	CHM 131	GEL 111	PHY 151
AST 151A	CHM 131 A	PHY 110	
BIO 111	CHM 151	PHY 110A	

   E. Mathematics (3 SHC).

MAT 140	MAT 161	*MAT 172
MAT 140A	MAT 161A	MAT 172A
MAT 151	*MAT 171	*MAT 175
MAT 151A	MAT 171A	MAT 175A

   * When choosing from the pre-calculus series select only one from each series: MAT 171/MAT 171A and MAT 172/MAT 172A; OR MAT 175/MAT 175A.

II. Other Requirements (37 SHC)

Mathematics Lab	1 SHC
Professional Program Courses:	32 SHC
Drama Electives:	3 SHC
ACA Eletive:	1 SHC

Pre-Major Associate in Fine Arts: Drama
A.F.A. Program (A1020C)

GENERAL EDUCATION COURSES:..**SHC**

English Composition:

ENG	111	Expository Writing	3
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:

ENG	231	American Literature I	3
		OR	
ENG	232	American Literature II	3
		OR	
ENG	241	British Literature I	3
		OR	
ENG	242	British Literature II	3
Elective			3

One (1) course should be selected from the following:

ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
COM	110	Introduction to Communication	3
COM	231	Public Speaking	3
DRA	111	Theatre Appreciation	3
DRA	112	Literature of the Theatre	3
DRA	115	Theatre Criticism	3
DRA	122	Oral Interpretation	3
DRA	126	Storytelling	3
HUM	110	Technology and Society	3
HUM	211	Humanities I	3
MUS	110	Music Appreciation	3
MUS	213	Opera and Musical Theatre	3
PHI	210	History of Philosophy	3
PHI	240	Introduction to Ethics	3
REL	110	World Religions	3
REL	211	Intro to Old Testament	3
REL	212	Intro to New Testament	3
REL	221	Religion in America	3

Social/Behavioral Sciences:

Electives 9

Electives should be selected from three (3) discipline areas from the following. One course must be a History course:

ANT	220	Cultural Anthropology	3
ANT	230	Physical Anthropology	3
ECO	251	Prin of Microeconomics	3
ECO	252	Prin of Macroeconomics	3
GEO	111	World Regional Geography	3
GEO	112	Cultural Geography	3
GEO	130	General Physical Geography	3
HIS	111	World Civilization I	3
HIS	112	World Civilization II	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
HIS	131	American History I	3
HIS	132	American History II	3
POL	110	Intro Political Science	3
POL	120	American Government	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3
SOC	225	Social Diversity	3

Natural Sciences/Mathematics:

Natural Sciences

Electives 4

Four (4) SHC should be selected from the following:

AST	151	General Astronomy I	3
AST	151A	General Astronomy I Lab	1
BIO	111	General Biology I	4
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
CHM	151	General Chemistry I	4
GEL	111	Introductory Geology	4
PHY	110	Conceptual Physics	3
PHY	110A	Conceptual Physics Lab	1
PHY	151	College Physics I	4

Mathematics

Elective 3

One (1) course should be selected from the following:

MAT	140	Survey of Mathematics	3
MAT	151	Statistics I	3
MAT	161	College Algebra	3
MAT	171	Precalculus Algebra	3
MAT	172	Precalculus Trigonometry	3
MAT	175	Precalculus	4

(Enrollment in the accompanying lab course is strongly recommended or may be required.)

DRAMA, con't.

DRAMA, Con't.

Other Major Courses (All courses are required)..32

DRA	120	Voice for Performance 3
DRA	130	Acting One 3
DRA	131	Acting Two 3
DRA	140	Stagecraft I 3
DRA	145	Stage Make-up 2
DRA	170	Play Production 3
DRA	171	Play Production II 3
DRA	211	Theatre History 3
DRA	212	Theatre History II 3
DRA	270	Play Production III 3
DRA	271	Play Production IV 3

Drama Electives 3

DAN	110	Dance Appreciation 3
DAN	124	Jazz Dance I 1
DAN	125	Jazz Dance II 1
DAN	130	Ballet I 2
DAN	140	Modern Dance I 2
DAN	141	Modern Dance II 2
DAN	211	Dance History I 3
DAN	212	Dance History II 3
DAN	225	Choreography I 3
DAN	264	Dance Production 3
DRA	112	Literature of the Theatre 3
DRA	122	Oral Interpretation 3
DRA	124	Readers Theatre 3
DRA	128	Children's Theatre 3
DRA	135	Acting for the Camera I 3
DRA	136	Acting for the Camera II 3
DRA	141	Stagecraft II 3
DRA	142	Costuming 3
DRA	150	Stage Management 3
DRA	240	Lighting for the Theatre 3
DRA	260	Directing 3

OTHER REQUIRED COURSES:

	Mathematics Lab 1
ACA	111	College Student Success 1
		OR
ACA	122	College Transfer Success 1

Total Credit Hours Required 65

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG	090	Composition Strategies 3
MAT		DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 (Each One (1) credit hour) 1
RED	090	Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

DRAMA (A1020C)
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
ACA	111	College Student Success	1	0	0	1
	OR	ACA 122 College Transfer Success				
ENG	111	Expository Writing	3	0	0	3
DRA	130	Acting One	0	6	0	3
DRA	140	Stagecraft I	0	6	0	3
DRA	170	Play Production	0	9	0	3
PSY	150	General Psychology	3	0	0	3
		Total	7	21	0	16
Spring - 1st year						
ENG	113	Literature Based Research	3	0	0	3
DRA	131	Acting Two	0	6	0	3
DRA	145	Stage Make-up	1	2	0	2
DRA	171	Play Production II	0	9	0	3
		Natural Science Elective				4
		Total	4	17	0	15
Summer - 1st year						
MAT	161	College Algebra	3	0	0	3
MAT	161 A	College Algebra Lab	0	2	0	1
		Total	3	2	0	4
Fall - 2nd year						
DRA	211	Theatre History I	3	0	0	3
DRA	260	Directing	0	6	0	3
DRA	270	Play Production III	0	9	0	3
ENG	231	American Literature I	3	0	0	3
	OR ENG 232	American Literature II				
	OR ENG 241	British Literature I				
	OR ENG 242	British Literature II				
		History Elective	3	0	0	3
		Total	9	15	0	15
Spring - 2nd year						
DRA	120	Voice for Performance	3	0	0	3
DRA	212	Theatre History II	3	0	0	3
DRA	271	Play Production IV	0	9	0	3
SOC	210	Intro to Sociology	3	0	0	3
		Humanities/Fine Arts Elective	3	0	0	3
		Total	12	9	0	15
		Grand Total	35	64	0	65

ASSOCIATE IN FINE ARTS DEGREE (Music)

The Associate in Fine Arts Degree is recommended for students who plan to transfer to senior institutions (1) to pursue programs in the arts that lead to degrees of Bachelor of Fine Arts, Bachelor of Arts, Bachelor of Science in Art Education or (2) to pursue programs in music that lead to degrees of Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Music Education, Bachelor of Science in Music Education, or Bachelor of Music Performance. Associate in Arts Degree candidates must complete the following requirements:

	SHC
I. General Education Core (28 SHC)	**28**
Communication (6 SHC)	
ENG 111, ENG 113	

Humanities/Fine Arts (6 SHC)
Required-three (3) hours in literature to be selected from:
ENG 231 or 241, and three (3) hours from one of the following:
Art, Communication, Drama, Language, Humanities, Philosophy, or Religion.

Social/Behavioral Science (9 SHC)
Required-three (3) hours in History, three (3) hours in Psychology, and three (3) hours in Sociology.

Natural Sciences (4 SHC)
Required-four (4) hours of Astronomy, Biology, Chemistry, Geology, or Physics.

Mathematics (3 SHC)
MAT 140-Higher Level College Transfer Courses.

II. Other Required Hours (37 SHC)	**37**
Mathematics Lab	1 Hour
Professional Program Courses	30 Hours
Music Electives	6 Hours
Total	**65**

ACA 111, College Student Success, or ACA 122, College Transfer Success, is strongly recommended.

Students who plan to transfer to a senior institution should determine the physical education and language requirements of the institution they plan to attend. Although Catawba Valley Community College does not have a physical education or language requirement, many senior institutions do have one or both requirements, and courses should be taken during the freshman and sophomore years.

ASSOCIATE IN FINE ARTS DEGREE GRADUATION REQUIREMENTS

I. General Education Core (28 SHC)
  A. Communication (6 SHC)
      ENG 111 and ENG 113
  B. Humanities/Fine Arts (6 SHC).
      Required three (3) hours of literature (ENG 231, 232, 241 or 242) and select one three (3) hour course from the following:

ART 111	DRA 112	MUS 110	REL 211
ART 114	DRA 122	MUS 213	REL 212
COM 110	DRA 126	PHI 210	REL 221
COM 231	HUM 110	PHI 240	
DRA 111	HUM 211	REL 110	

  C. Social/Behavioral Sciences (9 SHC).
      Select three (3) hours in History, three (3) hours in Psychology, and three (3) hours in Sociology.

ANT 220	GEO 112	HIS 122	PSY 150
ANT 230	GEO 130	HIS 131	SOC 210
ECO 251	HIS 111	HIS 132	SOC 213
ECO 252	HIS 112	POL 110	SOC 220
GEO 111	HIS 121	PSY 120	SOC 225

  D. Natural Sciences (4 SHC).

AST 151	CHM 131	GEL 111	PHY 151
AST 151A	CHM 131A	PHY 110	
BIO 111	CHM 151	PHY110 A	

  E. Mathematics (3 SHC).

MAT 140	MAT 161	*MAT 172
MAT 140A	MAT 161A	MAT 172A
MAT 151	*MAT 171	*MAT 175
MAT 151A	MAT 171A	MAT 175A

    * When choosing from the pre-calculus series select only one from each series: MAT 171/MAT 171A and MAT 172/MAT 172A; OR MAT 175/MAT 175A.

II. Other Requirements (37 SHC)

Mathematics Lab	1 SHC
Professional Program Courses:	30 SHC
Music Electives:	6 SHC

Pre-Major Associate in Fine Arts: Music and Music Education A.F.A. Program (A1020D)

GENERAL EDUCATION COURSES:..SHC

English Composition:

ENG	111	Expository Writing	3
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:

ENG	231	American Literature I	3
OR			
ENG	232	American Literature II	3
OR			
ENG	241	British Literature I	3
OR			
ENG	242	British Literature II	3

Humanities/Fine Arts Electives: 3
    One (1) course should be selected from the following:

ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
COM	110	Introduction to Communication	3
COM	231	Public Speaking	3
DRA	111	Theatre Appreciation	3
DRA	112	Literature of the Theatre	3
DRA	122	Oral Interpretation	3
DRA	126	Storytelling	3
HUM	110	Technology and Society	3
HUM	211	Humanities I	3
MUS	110	Music Appreciation	3
MUS	213	Opera and Musical Theatre	3
PHI	210	History of Philosophy	3
PHI	240	Introduction to Ethics	3
REL	110	World Religions	3
REL	211	Intro to Old Testament	3
REL	212	Intro to New Testament	3
REL	221	Religion in America	3

Social/Behavioral Sciences:

Electives 9
    Electives should be selected from three (3) discipline areas from the following. One course must be a History course:

ANT	220	Cultural Anthropology	3
ANT	230	Physical Anthropology	3
ECO	251	Prin of Microeconomics	3
ECO	252	Prin of Macroeconomics	3
GEO	111	World Regional Geography	3
GEO	112	Cultural Geography	3
GEO	130	General Physical Geography	3
HIS	111	World Civilization I	3
HIS	112	World Civilization II	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
HIS	131	American History I	3
HIS	132	American History II	3
POL	110	Intro Political Science	3
POL	120	American Government	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3
SOC	225	Social Diversity	3

Natural Sciences/Mathematics:

Natural Sciences

Electives 4
    Four (4) SHC should be selected from the following:

AST	151	General Astronomy I	3
AST	151A	General Astronomy I Lab	1
BIO	111	General Biology I	4
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
CHM	151	General Chemistry I	4
GEL	111	Introductory Geology	4
PHY	110	Conceptual Physics	3
PHY	110A	Conceptual Physics Lab	1
PHY	151	College Physics I	4

Mathematics

Elective 3
    One (1) course should be selected from the following:

MAT	140	Survey of Mathematics	3
MAT	151	Statistics I	3
MAT	161	College Algebra	3
MAT	171	Precalculus Algebra	3
MAT	172	Precalculus Trigonometry	3
MAT	175	Precalculus	4

(Enrollment in the accompanying lab course is strongly recommended or may be required.)

MUSIC con't

Music and Music Education, Con't.

MAJOR COURSES:

Other Major Hours (All courses are required)......................................33

Course			Credits
Mathematics Lab			1
MUS	121	Music Theory I	4
MUS	122	Music Theory II	4
MUS	131	Chorus I	1
MUS	132	Chorus II	1
MUS	231	Chorus III	1
MUS	232	Chorus IV	1
MUS	151	Class Music I	1
MUS	152	Class Music II	1
MUS	161	Applied Music I	2
MUS	162	Applied Music II	2
MUS	221	Music Theory III	4
MUS	222	Music Theory IV	4
MUS	251	Class Music III	1
MUS	252	Class Music IV	1
MUS	261	Applied Music III	2
MUS	262	Applied Music IV	2

Electives 4

Four (4) SHC should be selected from the following:

Course			Credits
MUS	111	Fundamentals of Music	3
MUS	112	Introduction to Jazz	3
MUS	113	American Music	3
MUS	133	Band I	1
MUS	134	Band II	1
MUS	135	Jazz Ensemble I	1
MUS	136	Jazz Ensemble II	1
MUS	141	Ensemble I	1
MUS	142	Ensemble II	1
MUS	175	Recording Techniques I	2
MUS	176	Recording Techniques II	2
MUS	181	Show Choir I	4
MUS	182	Show Choir II	4
MUS	210	History of Rock Music	3
MUS	211	History of Country Music	3
MUS	212	American Musical Theatre	3
MUS	213	Opera and Musical Theatre	3
MUS	214	Electronic Music I	2
MUS	215	Electronic Music II	2
MUS	217	Elementary Conducting	2
MUS	233	Band III	1
MUS	234	Band IV	1
MUS	235	Jazz Ensemble III	1
MUS	236	Jazz Ensemble IV	1
MUS	241	Ensemble III	1
MUS	242	Ensemble IV	1
MUS	270	Music Literature	3
MUS	281	Show Choir III	4
MUS	282	Show Choir IV	4
MUS	283	Varied Cultures/Mus Perf	2

(Some courses may be used to satisfy other requirements. Therefore, they cannot also be used for elective credit to fulfill this requirement.)

Total Credit Hours Required 65

ACA 111, College Student Success,
or ACA 122, College Student Success, is strongly recommended.

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG	090	Composition Strategies	3
MAT		DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 (Each One (1) credit hour)	1
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Music and Music Education & A1020D
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
ACA	111	College Student Success (Recommended)	1	0	0	1
	OR	ACA 122 College Transfer Success (Rec.)				
ENG	111	Expository Writing	3	0	0	3
MUS	121	Music Theory I	3	2	0	4
MUS	151P	Class Piano I	0	2	0	1
MUS	161	Applied Music I (V,P,W,B,G,)	1	2	0	2
MUS	131	Chorus I	0	2	0	1
	OR MUS 141 Ensemble I					
	Math Elective		3	0	0	3
	(MAT 161 College Algebra and MAT 161A College Algebra Lab - Recommended)					
		Total	11	8	0	15
Spring - 1st year						
ENG	113	Literature Based Research	3	0	0	3
MUS	122	Music Theory II	3	2	0	4
MUS	152P	Class Piano II	0	2	0	1
MUS	162	Applied Music II	1	2	0	2
MUS	132	Chorus II	0	2	0	1
	OR MUS 142 Ensemble II					
	Natural Science Elective					4
	Music Elective					2
		Total	7	8	0	17
Fall - 2nd year						
MUS	221	Music Theory III	3	2	0	4
MUS	251P	Class Piano III	0	2	0	1
MUS	261	Applied Music III	1	2	0	2
MUS	231	Chorus III	0	2	0	1
	OR MUS 241 Ensemble III -					
PSY	150	General Psychology	3	0	0	3
SOC	210	Intro to Sociology	3	0	0	3
	Music Elective					2
		Total	10	8	0	16
Spring - 2nd year						
MUS	222	Music Theory IV	3	2	0	4
MUS	252P	Class Piano IV	0	2	0	1
MUS	262	Applied Music IV	1	2	0	2
MUS	232	Chorus IV	0	2	0	1
	OR MUS 242 Ensemble IV					
ENG	231	American Literature I	3	0	0	3
	OR ENG 232 American Literature II					
	OR ENG 241 British Literature I					
	OR ENG 242 British Literature II					
	Humanities/Fine Arts Elective					3
	History Elective					3
		Total	7	8	0	17
		Grand Total	35	32	0	65

CAREER PROGRAMS

Career programs are offered in the Schools of Academics, Education & Fine Arts; Business, Industry & Technology; Health and Public Services. Specific program offerings and options are listed alphabetically.   Descriptions for career courses are listed alphabetically by subject area in the course listings beginning on page 116.

SCHOOL OF ACADEMICS, EDUCATION & FINE ARTS

In addition to excellent two-year programs in such diverse areas as Early Childhood Education, Photography, and Graphics, the School offers general education core courses for students planning to transfer to a four-year institution. An agreement with the University of North Carolina system as well as many private colleges assures that our graduates' courses will be accepted for full credit. Studies in the humanities, sciences, arts, social sciences, English, and mathematics are a part of the general education core and are given high priority by our creative, innovative faculty members. The following programs are offered in the School of Academics, Education, and Fine Arts:

- Associate in Arts
- Associate in Fine Arts: Pre-Major Music & Music Education
- Associate in Fine Arts: Pre-Major Drama
- Associate in Science
- Associate in General Education
- Advertising and Graphic Design
- Early Childhood Education
- Infant/Toddler Care Certificate
- Graphic Arts & Imaging Technology
- Health & Fitness Science
- Photographic Technology

SCHOOL OF BUSINESS, INDUSTRY & TECHNOLOGY

Today's emerging digital economy demands problem solving skills using state-of-the-art technology and equipment. Programs within CVCC's School of Business, Industry & Technology use some of the most current technology to prepare you for a rapidly changing marketplace. From our Workforce Development Innovation Center which provides services to help businesses succeed in today's global economy, to our academic departments, we stand prepared to assist you in reaching your goals. The School of Business, Industry, and Technology is known for its talented faculty, staff, students and alumni. These stakeholders have worked to create an innovative climate that stresses teamwork, entrepreneurship, a global point of view, and an emphasis on new ideas and fresh perspectives.   The following programs are offered in the School of Business, Industry, and Technology:

- Accounting
- Air Conditioning, Heating and Refrigeration Technology
- Architectural Technology
- Automotive Systems Technology
- Business Administration
- Computer Engineering Technology
- Computer Information Technology
- Computer-Integrated Machining Technology
- Computer Programming
- Cosmetology
- Electrical/Electronics Technology
- Electronics Engineering Technology
- Entrepreneurship
- Funeral Service Education (Collaborative)
- General Occupational Technology
- Horticulture Technology
- Industrial Systems Technology
- Information Systems Security
- Mechanical Engineering Technology
- Networking Technology
- Office Administration
- Truck Driver Training (Collaborative)
- Turfgrass Management Technology
- Furniture Upholstery
- Web Technologies
- Welding Technology

SCHOOL OF HEALTH AND PUBLIC SERVICES

Individuals choosing health services should have an appreciation for human life, enjoy working with people of all ages, and be interested in the application of biological and scientific principles. Students will spend time in clinical facilities, hospitals, and other locations gaining skills through first-hand experience under the direction of competent professionals. Graduates of health and human resources associate degree programs may seek immediate employment. Students who are interested in pursuing a four year degree should contact their advisor or Student Services for specific information. Public Services provides comprehensive programs that offer associate degrees, certificates, and training in an array of disciplines and occupational interest to the Public Services community. In addition, technical pre-service and in-service advanced training is provided in a number of areas. Certificates are offered for Basic Law Enforcement Training (BLET) and in a range of criminal justice themes. Continuing/in-service public safety instruction is also provided in the areas of emergency medical training, fire and rescue. The following programs are offered in the School of Health and Public Services:

- Basic Law Enforcement Training
- Cardiovascular Sonography (Collaborative)
- Criminal Justice Technology
- Criminal Justice Technology: Latent Evidence Concentration
- Cyber Crime Technology
- Dental Hygiene
- Electroneurodiagnostic Technology
- Emergency Medical Science
- Fire Protection Technology
- Health Information Technology
- Healthcare Management Technology
- Medical Office Administration
- Medical Sonography (Collaborative)
- Medical Transcription
- Nuclear Medicine Technology (Collaborative)
- Associate Degree Nursing
- Pathology (Collaborative)
- Physical Therapist Assistant (Collaborative)
- Polysomnography
- Radiography
- Respiratory Therapy
- Speech-Language Pathology (Collaborative)
- Surgical Technology

COOPERATIVE EDUCATION

Cooperative Education (Co-op) is designed to give students enrolled in many programs within the College a chance to work on a job while completing their degree. This combination of classroom instruction with practical/related work experience provides numerous benefits to participating students.

Co-op students work one or more semesters in part-time or full time jobs related to their major. Academic credit is given for the learning gained during the work period. Students are assigned to a Co-op faculty coordinator and receive on-the-job supervision by the employers.

Admission to the Cooperative Education program is based on scholarship and interest, not financial need. Employers select the students and determine salaries to be offered; therefore, the college does not guarantee placement for all who are eligible.

Eligibility. Students who are enrolled in programs offering Co-op for academic credit and who have completed a minimum of 12 credit hours at the college (unless otherwise specified by the program) are eligible to participate if they meet the following conditions:

1. Have a minimum 2.00 GPA.
2. Obtain approval from Co-op program staff.
3. Have approval of Co-op faculty coordinator.
4. Willing to follow program guidelines.
5. Certain curriculum programs may specify additional conditions.

Application Procedure. Interested students should schedule an interview with the Coordinator of Cooperative Education. Students are selected on the basis of information obtained from their application, college transcripts, and an interview regarding career goals. After students have been accepted into the program, the Co-op program staff or faculty coordinator will be responsible for locating and/or approving an appropriate work assignment.

Academic Credit. Co-op students may earn one or more semester hours of Cooperative Education credit toward completion of diploma or degree requirements in approved curriculums.

Registration. Registration for Co-op courses is restricted. Students will meet with the Coordinator of Cooperative Education to register for these courses.

Students interested in Cooperative Education are invited to contact the Co-op Office. Information is also available through faculty advisors.

NOTE: Co-op options are listed under each participating curriculum course schedule.

PROGRAM SEQUENCES

Program Sequences are suggestions only. The College retains the right to alter Program Sequences as it deems necessary.

CAREER PROGRAM ELECTIVES

Humanities/fine arts and/or Social/behavioral science elective courses are specified in some programs. In order to assist students in planning their schedules, courses in these categories that are generally offered at CVCC are listed. Additional courses can be viewed at http://www.nccommunitycolleges.edu/Programs/docs/GenEd_Matrix_09-28-2010.pdf.

If a course is specified as a required course in the program sequence, it may not be chosen as an elective. All prerequisites and corequisites must be met for these courses.

In programs where only one (1) Humanities/Fine Arts elective is required, introductory foreign language courses are not accepted as the elective.

Humanities/Fine Arts Elective

ART	111	Art Appreciation	3-0-0-3
ART	114	Art History Survey I	3-0-0-3
DRA	111	Theatre Appreciation	3-0-0-3
DRA	112	Literature of the Theatre	3-0-0-3
DRA	120	Voice for Performance	3-0-0-3
DRA	122	Oral Interpretation	3-0-0-3
DRA	126	Storytelling	3-0-0-3
DRA	130	Acting I	0-6-0-3
ENG	125	Creative Writing I	3-0-0-3
ENG	231	American Literature I	3-0-0-3
ENG	232	American Literature II	3-0-0-3
ENG	241	British Literature I	3-0-0-3
ENG	242	British Literature II	3-0-0-3
ENG	251	Western World Literature I	3-0-0-3
ENG	252	Western World Literature II	3-0-0-3
ENG	273	African-American Literature	3-0-0-3
ENG	275	Science Fiction	3-0-0-3
HUM	110	Technology & Society	3-0-0-3
HUM	120	Cultural Studies	3-0-0-3
HUM	211	Humanities I	3-0-0-3
HUM	220	Human Values and Meaning	3-0-0-3
MUS	110	Music Appreciation	3-0-0-3
MUS	111	Fundamentals of Music	3-0-0-3
MUS	112	Introduction to Jazz	3-0-0-3
MUS	213	Opera and Musical Theatre	3-0-0-3
PHI	210	History of Philosophy	3-0-0-3
PHI	240	Introduction to Ethics	3-0-0-3
REL	110	World Religions	3-0-0-3
REL	211	Intro to Old Testament	3-0-0-3
REL	212	Intro to New Testament	3-0-0-3
REL	221	Religion in America	3-0-0-3
SPA	141	Culture and Civilization	3-0-0-3

Social/Behavioral Science Elective

ANT	220	Cultural Anthropology	3-0-0-3
ANT	221	Comparative Cultures	3-0-0-3
ANT	230	Physical Anthropology	3-0-0-3
ECO	251	Prin of Microeconomics	3-0-0-3
ECO	252	Prin of Macroeconomics	3-0-0-3
GEO	111	World Regional Geography	3-0-0-3
GEO	112	Cultural Geography	3-0-0-3
GEO	113	Economic Geography	3-0-0-3
GEO	121	North Carolina Geography	3-0-0-3
GEO	130	General Physical Geography	3-0-0-3
HIS	111	World Civilizations I	3-0-0-3
HIS	112	World Civilizations II	3-0-0-3
HIS	121	Western Civilization I	3-0-0-3
HIS	122	Western Civilization II	3-0-0-3
HIS	131	American History I	3-0-0-3
HIS	132	American History II	3-0-0-3
HIS	151	Hispanic Civilization	3-0-0-3
HIS	162	Women and History	3-0-0-3
HIS	211	Ancient History	3-0-0-3
HIS	221	African-American History	3-0-0-3
HIS	226	The Civil War	3-0-0-3
HIS	227	Native American History	3-0-0-3
HIS	236	North Carolina History	3-0-0-3
HIS	261	East Asian History	3-0-0-3
POL	110	Intro Political Science	3-0-0-3
POL	120	American Government	3-0-0-3
POL	130	State & Local Government	3-0-0-3
PSY	110	Life Span Development	3-0-0-3
PSY	150	General Psychology	3-0-0-3
PSY	244	Child Development I	3-0-0-3
PSY	245	Child Development II	3-0-0-3
SOC	210	Introduction to Sociology	3-0-0-3
SOC	213	Sociology of the Family	3-0-0-3
SOC	220	Social Problems	3-0-0-3
SOC	225	Social Diversity	3-0-0-3
SOC	230	Race and Ethnic Relations	3-0-0-3
SOC	234	Sociology of Gender	3-0-0-3
SOC	242	Sociology of Deviance	3-0-0-3
SOC	244	Soc of Death & Dying	3-0-0-3
SOC	250	Sociology of Religion	3-0-0-3
SOC	254	Rural & Urban Sociology	3-0-0-3

ACCOUNTING
A.A.S. Program (A25100)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day -- four semesters full-time attendance.   The Associate in Applied Science Degree is awarded graduates of this curriculum. The Accounting curriculum is designed to provide students with the knowledge and the skills necessary for employment and growth in the accounting profession. Using the "language of business," accountants assemble and analyze, process, and communicate essential information about financial operations. In addition to course work in accounting principles, theories, and practice, students will study business law, finance, management, and economics. Related skills are developed through the study of communications, computer applications, financial analysis, critical thinking skills, and ethics. Graduates should qualify for entry-level accounting positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems, and governmental agencies. With work experience and additional education, an individual may advance in the accounting profession.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG 111   Expository Writing 3
ENG 112   Argument-Based Research 3
        OR
ENG 113   Literature-Based Research............................3
        OR
ENG 114   Prof Research & Reporting 3

Humanities/Fine Arts:
Elective 3

Natural Sciences/Mathematics:
MAT 115   Mathematical Models 3
        OR
MAT 161   College Algebra 3
MAT 161A   College Algebra Lab.....................................1

Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
ACC   120   Prin of Financial Acct...................................4
ACC   121   Prin of Managerial Acct................................4
ACC   129   Individual Income Taxes................................3
ACC   140   Payroll Accounting 2
ACC   150   Acct Software Appl 2
ACC   220   Intermediate Accounting I.............................4
ACC   225   Cost Accounting 3
ACC   240   Gov & Not-for-Profit Acct............................3
BUS   110   Introduction to Business................................3
BUS   115   Business Law I 3
BUS   116   Business Law II 3
CIS   110   Introduction to Computers.............................3
COE   110   World of Work 1
CTS   130   Spreadsheet..3
ECO   251   Prin of Microeconomics 3

    Accounting Electives **7**
     ACC   130   Business Income Taxes.............................3
     ACC   221   Intermediate Acct II 4
     ACC   269   Autiting & Assurance Services................3
     BUS   125   Personal Finance 3
     BUS   139   Entrepreneurship I 3
     BUS   245   Entrepreneurship II 3
     COE   XXX   Co-op Work Experience........................ 1-6

Total Credit Hours Required 66-67

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals.................................3
ENG   090   Composition Strategies.....................................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 60,
             DMA 70, DMA 80..8
RED   090   Improved College Reading...............................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Description section for prerequisite course information.

Accounting • A25100
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
ACC 120 Principles of Financial Accounting	3	2	0	4
BUS 110 Introduction to Business	3	0	0	3
ENG 111 Expository Writing	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
OR MAT 161 College Algebra	3	0	0	3
MAT 161 A College Algebra Lab	0	2	0	1
Social/Behavorial Science Elective	3	0	0	3
Total	14/15	4	0	16/17
Spring - 1st year				
ACC 121 Principles of Managerial Accounting	3	2	0	4
BUS 115 Business Law I	3	0	0	3
CIS 110 Introduction to Computers	2	2	0	3
ENG 112 Argument Based Research (Preferred)	3	0	0	3
OR ENG 113 Literature Based Research	3	0	0	3
OR ENG 114 Prof. Research and Development	3	0	0	3
Accounting Elective	3	0	0	3
Total	14	4	0	16
Fall - 2nd year				
ACC 129 Individual Income Taxes	2	2	0	3
ACC 220 Intermediate Accounting I	3	2	0	4
ACC 225 Cost Accounting	3	0	0	3
CTS 130 Spreadsheet	2	2	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	13	6	0	16
Spring - 2nd year				
ACC 140 Payroll Accounting	1	2	0	2
ACC 150 Accounting Software Applications	1	2	0	2
ACC 240 Government and Not-for-Profit Acct	3	0	0	3
BUS 116 Business Law II	3	0	0	3
COE 110 World of Work	1	0	0	1
ECO 251 Principles of Microeconomics	3	0	0	3
Accounting Elective	3	2	0	4
Total	15	6	0	18
Grand Total	56/57	20	0	66/67

ACCOUNTING - Diploma Program (D25100)

GENERAL EDUCATION COURSES:			SHC
ENG	111	Expository Writing	3
		Social/Behavioral Sciences Elective	3

MAJOR COURSES:			SHC
ACC	120	Prin of Financial Acct	4
ACC	121	Prin of Managerial Acct	4
ACC	129	Individual Income Taxes	3
ACC	140	Payroll Accounting	2
ACC	150	Acct Software Appl	2
BUS	110	Introduction to Business	3
BUS	115	Business Law I	3
CIS	110	Introduction to Computers	3
COE	110	World of Work	1
CTS	130	Spreadsheet	3
ECO	251	Prin of Microeconomics	3

Total Credit Hours Required 37

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
RED	090	Improved College Reading	4
ENG	090	Composition Strategies	3

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Description section for prerequisite course information.

Accounting - Diploma Program (D25100) Suggested Sequence

Fall - 1st year

ACC	120	Principles of Financial Accounting	3	2	0	4
BUS	110	Introduction to Business	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
		Total	11	4	0	13

Spring - 1st year

ACC	121	Principles of Managerial Accounting	3	2	0	4
ACC	140	Payroll Accounting	1	2	0	2
ACC	150	Accounting Software Applications	1	2	0	2
BUS	115	Business Law I	3	0	0	3
		Total	8	6	0	11

Fall - 2nd year

ACC	129	Individual Income Taxes	2	2	0	3
CTS	130	Spreadsheet	2	2	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
		Total	7	4	0	9

Spring - 2nd year

COE	110	World of Work	1	0	0	1
		Social/Behavorial Science Elective	3	0	0	3
		Total	4	0	0	4
		Grand Total	30	14	0	37

ACCOUNTING
General - Certificate Program (C2510001)

MAJOR COURSES:			SHC
ACC	120	Prin of Financial Acct	4
ACC	121	Prin of Managerial Acct	4
ACC	129	Individual Income Taxes	3
ACC	140	Payroll Accounting	2

Total Credit Hours Required 13

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
RED	090	Improved College Reading	4
ENG	090	Composition Strategies	3

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Description section for prerequisite course information.

General - Certificate Program • (C2510001)
Suggested Prog. Seq. Day

Fall - 1st Year

ACC	120	Principles of Financial Accounting	3	2	0	4
ACC	121	Principles of Managerial Accounting	3	2	0	4
		Total	6	4	0	8

Spring - 1st Year

ACC	129	Individual Income Taxes	2	2	0	3
ACC	140	Payroll Accounting	1	2	0	2
		Total	3	4	0	5
		Grand Total	9	8	0	13

ACCOUNTING
Computerized - Certificate Program (C2510003)

MAJOR COURSES:			SHC
ACC	120	Prin of Financial Acct	4
ACC	150	Acct Software Appl	2
CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3

Total Credit Hours Required 12

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
RED	090	Improved College Reading	4
ENG	090	Composition Strategies	3

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Description section for prerequisite course information.

Computerized - Cert. Prog. • (C2510003)
Suggested Program Sequence Day

Fall - 1st Year

ACC	120	Principles of Financial Accounting	3	2	0	4
CIS	110	Introduction to Computers	2	2	0	3
		Total	5	4	0	7

Spring - 1st Year

ACC	150	Accounting Software Applications	1	2	0	2
CTS	130	Spreadsheet	2	2	0	3
		Total	3	4	0	5
		Grand Total	8	8	0	12

ACCOUNTING
Taxation - Certificate Program (C2510004)

MAJOR COURSES:			SHC
ACC	120	Prin of Financial Acct	4
ACC	129	Individual Income Taxes	3
ACC	130	Business Income Taxes	3
ACC	140	Payroll Accounting	2

Total Credit Hours Required 12

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
RED	090	Improved College Reading	4
ENG	090	Composition Strategies	3

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Description section for prerequisite course information.

Taxation - Certificate Program • (C2510004)
Suggested Program Sequence Day

Fall - 1st Year

ACC	120	Principles of Financial Accounting	3	2	0	4
ACC	129	Individual Income Taxes	2	2	0	3
		Total	5	4	0	7

Spring - 1st Year

ACC	130	Business Income Taxes	2	2	0	3
ACC	140	Payroll Accounting	1	2	0	2
		Total	3	4	0	5
		Grand Total	8	8	0	12

ADVERTISING AND GRAPHIC DESIGN
A.A.S. Program (A30100)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.
The Advertising and Graphic Design curriculum is designed to provide students with knowledge and skills necessary for employment in the graphic design profession, which emphasizes design, advertising, illustration, and digital and multimedia preparation of printed and electronic promotional materials. Students will be trained in the development of concept and design for promotional materials such as newspaper and magazine advertisements, posters, folders, letterheads, corporate symbols, brochures, booklets, preparation of art for printing, lettering and typography, photography, and electronic media. Graduates should qualify for employment opportunities with graphic design studios, advertising agencies, printing companies, department stores, a wide variety of manufacturing industries, newspapers, and businesses with in-house graphics operations.

GENERAL EDUCATION COURSES: **SHC**
English/Communications:
ENG   111   Expository Writing 3
ENG   114   Prof Research & Reporting 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   140   Survey of Mathematics 3
MAT   140A Survey of Mathematics Lab 1
Social/Behavioral Sciences:
Elective 3
MAJOR COURSES:
BUS   110   Introduction to Business...3
GRA   151   Computer Graphics I..2
GRA   152   Computer Graphics II...2
GRA   153   Computer Graphics III..2
GRA   255   Image Manipulation I...2
GRD   110   Typography I..3
GRD   121   Drawing Fundamentals I...2
GRD   131   Illustration I...2
GRD   141   Graphic Design I...4
GRD   142   Graphic Design II..4
GRD   180   Interactive Design...3
GRD   241   Graphic Design III...4
GRD   249   Advanced Design Practice.......................................4
GRD   265   Digital Print Production..3
GRD   280   Portfolio Design..4
MKT   120   Principles of Marketing..3
Program Elective OR Co-op 3
          Students are required to take 3 SHC from the following:
          ART   131   Drawing I 3
          ART   264   Digital Photography I 3
          CIS   110   Introduction to Computers............... 3
          COE   XXX   Co-op Work Experience 1-3
          GRA   121   Graphic Arts I 4
          GRA   245   Printing Sales/Service..................... 3
          GRA   256   Image Manipulation II...................... 2
          MKT   220   Advertising and Sales Promotion.... 3
          MKT   221   Consumer Behavior.......................... 3
          PHO   110   Fund of Photography 5
          PRN   155   Screen Printing I.............................. 2
          SGD   111   Introduction to SGD.......................... 3
          SGD   112   SGD Design....................................... 3
          SGD   114   3D Modeling....................................... 3
          WEB   110   Internet/Web Fundamentals............. 3
          WEB   111   Intro to Web Graphics...................... 3
          WEB   120   Intro Internet Multimedia 3
OTHER REQUIRED COURSES:
ACA   111   College Student Success.......................................1

Co-op Option: Qualified students may elect to take up to 3 credit hours of cooperative education in place of 3 hours Program electives.

Total Credit Hours Required 67

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals...3
ENG   090   Composition Strategies...3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading..4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Advertising and Graphic Design • A30100
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st Year				
ACA 111 College Student Success	1	0	0	1
GRA 151 Computer Graphics I	1	3	0	2
GRD 141 Graphic Design I	2	4	0	4
GRD 110 Typography I	2	2	0	3
GRD 121 Drawing Fundamentals I	1	3	0	2
ENG 111 Expository Writing	3	0	0	3
Total	10	12	0	15
Spring - 1st year				
GRA 152 Computer Graphics II	1	3	0	2
GRD 142 Graphic Design II	2	4	0	4
GRA 255 Image Manipulation I	1	3	0	2
GRD 131 Illustration I	1	3	0	2
ENG 114 Prof Research & Reporting	3	0	0	3
Total	8	13	0	13
Summer - 1st year				
BUS 110 Introduction to Business	3	0	0	3
MAT 140 Survey of Mathematics	3	0	0	3
MAT 140A Survey of Mathematics Lab	0	2	0	1
OR a higher Math				
Social/Behavioral Science Elective	3	0	0	3
Total	9	2	0	10
Fall - 2nd year				
GRA 153 Computer Graphics III	1	3	0	2
GRD 180 Interactive Design	1	4	0	3
GRD 241 Graphic Design III	2	4	0	4
GRD 265 Digital Print Production	1	4	0	3
MKT 120 Principles of Marketing	3	0	0	3
Total	8	15	0	15
Spring - 2nd year				
GRD 249 Advanced Design Practice	1	9	0	4
GRD 280 Portfolio Design	2	4	0	4
Humanities/Fine Arts Elective	3	0	0	3
Program Elective OR Co-op Work Experience				3
Total	6	13	0	14
Grand Total	41	55	0	67

Program Electives- Must be selected from the following list:
ART 131, ART 264, CIS 110, COE XXX, GRA 121, GRA 245, GRA 256, MKT 220, MKT 221, PHO 110, PRN 155, SGD 111, SGD 112, SGD 114, WEB 110, WEB 111, WEB 120.

Advertising and Graphic Design - Cert. Program (C30100)

MAJOR COURSES:.. **SHC**
GRD   141   Graphic Design I..4
GRA   151   Computer Graphics I 2
GRD   142   Graphic Design II...4
GRA   152   Computer Graphics II 2

Total Credit Hours Required 12

Advertising and Graphic Design - Cert. Prog. • (C30100)
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st Year				
GRD 141 Graphic Design I	2	4	0	4
GRA 151 Computer Graphics I	1	3	0	2
Total	3	7	0	6
Spring - 1st Year				
GRD 142 Graphic Design II	2	4	0	4
GRA 152 Computer Graphics II	1	3	0	2
Total	3	7	0	6
Grand Total	6	14	0	12

AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY
Diploma Program (D35100)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours Minimum time for completion: Day -- two semesters full-time attendance; Evening -- four semesters of part-time attendance. The Diploma is awarded graduates of this curriculum. The Air Conditioning, Heating, and Refrigeration Technology curriculum provides the basic knowledge to develop skills necessary to work with residential and light commercial systems. Topics include mechanical refrigeration, heating and cooling theory, electricity, controls, and safety. The diploma program covers air conditioning, furnaces, heat pumps, tools and instruments. Diploma graduates should be able to assist in the start up, preventive maintenance, service, repair, and/or installation of residential and light commercial systems.

GENERAL EDUCATION COURSES:..SHC

English/Communications:
ENG   102 Applied Communications II......................3
OR
ENG   111 Expository Writing 3
Natural Sciences/Mathematics:
MAT   101 Applied Mathematics I 3
OR
MAT   115 Mathematical Models 3

MAJOR COURSES:
AHR   110 Intro to Refrigeration.................................5
AHR   111 HVACR Electricity.....................................3
AHR   112 Heating Technology...................................4
AHR   113 Comfort Cooling-......................................4
AHR   114 Heat Pump Technology 4
AHR   130 HVAC Controls...3
AHR   151 HVAC Duct Systems I 2
AHR   160 Refrigerant Certification............................1
AHR   180 HVACR Customer Relations......................1
AHR   210 Residential Building Code 2
AHR   211 Residential System Design.........................3
COE   110 World of Work 1

Total Credit Hours Required 39

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080 Computing Fundamentals 3
MAT   DMA 010, DMA 020, DMA 030 3
RED   080 Intro to College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Air Conditioning, Heating and Refrigeration • D35100
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
AHR	112	Heating Technology	2	4	0	4
AHR	151	HVAC Duct Systems I	1	3	0	2
AHR	160	Refrigeration Certification	1	0	0	1
AHR	211	Residential Systems Design	2	2	0	3
		Total	10	17	0	18
Spring - 1st year						
AHR	113	Comfort Cooling	2	4	0	4
AHR	210	Residential Building Code	1	2	0	2
AHR	114	Heat Pump Technology	2	4	0	4
AHR	130	HVAC Controls	2	2	0	3
AHR	180	HVACR Customer Relations	1	0	0	1
COE	110	World of Work	1	0	0	1
MAT	101	Applied Mathematics I	2	2	0	3
	OR MAT 115 Mathematical Models		2	2	0	3
		Total	10	14	0	18
Summer - 1year						
ENG	102	Applied Communications II	3	0	0	3
	OR ENG 111 Expository Writing		3	0	0	3
		Total	3	0	0	3
		Grand Total	23	31	0	39

Air Conditioning, Heating and Refrigeration • D35100
Suggested Program Sequence Night

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
MAT	101	Applied Mathematics I	2	2	0	3
	OR MAT 115 Mathematical Models		2	2	0	3
		Total	6	10	0	11
Spring - 1st year						
AHR	160	Refrigeration Certification	1	0	0	1
AHR	113	Comfort Cooling	2	4	0	4
AHR	130	HVAC Controls	2	2	0	3
		Total	5	6	0	8
Fall - 2nd year						
AHR	112	Heating Technology	2	4	0	4
AHR	151	HVAC Duct Systems I	1	3	0	2
AHR	211	Residential Systems Design	2	2	0	3
		Total	5	9	0	9
Spring - 2nd year						
AHR	114	Heat Pump Technology	2	4	0	4
AHR	180	HVACR Customer Relations	1	0	0	1
AHR	210	Residential Building Code	1	2	0	2
COE	110	World of Work	1	0	0	1
		Total	5	6	0	8
Summer - 2nd year						
ENG	102	Applied Communications II	3	0	0	3
	OR ENG 111 Expository Writing		3	0	0	3
		Total	3	0	0	3
		Grand Total	23	31	0	39

Air Conditioning, Heating and Refrigeration Certificate • C35100

MAJOR COURSES:
AHR   110 Intro to Refrigeration 5
AHR   111 HVACR Electricity 3
AHR   112 Heating Technology..4
AHR   160 Refrigerant Certification 1

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Air Conditioning, Heating and Refrigeration Certificate • C35100
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
AHR	112	Heating Technology	2	4	0	4
AHR	160	Refrigeration Certification	1	0	0	1
		Total	7	12	0	13
		Grand Total	7	12	0	13

Air Conditioning, Heating and Refrigeration Certificate • C35100
Suggested Program Sequence Night

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
		Total	4	8	0	8
Spring - 1st year						
AHR	160	Refrigeration Certification	1	0	0	1
		Total	1	0	0	1
Summer - 2nd year						
AHR	112	Heating Technology	2	4	0	4
		Total	2	4	0	4
		Grand Total	7	12	0	13

ARCHITECTURAL TECHNOLOGY
A.A.S. Program (A40100)

Most courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: four semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Architectural Technology curriculum prepares individuals with knowledge and skills that can lead to employment in the field of architecture or one of the associated professions. Students receive instruction in construction document preparation, materials and methods, environmental and structural systems, building codes and specifications, and computer applications, as well as complete a design project. Optional courses may be provided to suit specific career needs. Upon completion graduates have career opportunities within the architectural, engineering, and construction professions as well as positions in industry and government.

GENERAL EDUCATION COURSES:...SHC

English/Communications:..
ENG 111   Expository Writing...3
ENG 114   Prof Research & Reporting..............................3
    OR
ENG 112   Argument-Based Research 3
    OR
ENG 113   Literature-Based Research...............................3
Humanities/Fine Arts :
Elective 3
Natural Sciences/Mathematics:
MAT 121   Algebra/Trigonometry I....................................3
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:

ARC 111   Intro to Arch Technology....................................3
ARC 112   Constr Matls & Methods 4
ARC 113   Residential Arch Tech..3
ARC 114   Architectural CAD..2
ARC 114A Architectural CAD Lab..1
ARC 119   Structural Drafting...3
ARC 131   Building Codes 3
ARC 132   Specifications and Contracts.............................2
ARC 211   Light Constr Technology 3
ARC 213   Design Project..4
ARC 220   Adv Architect CAD 2
ARC 230   Environmental Systems 4
ARC 235   Architectural Portfolio..3
ARC 240   Site Planning..3
ARC 250   Survey of Architecture.......................................3
CIS 110   Introduction to Computers.................................3
CIV 230   Construction Estimating 3

Co-op Option: Qualified students may elect to take 2 credit hours of cooperative education in place of ARC 132.

Total Credit Hours Required 64

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS   080   Computing Fundamentals..3
ENG   090   Composition Strategies...3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Description section for prerequisite course information.

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ARC 111	Intro to Architectural Technology	1	6	0	3
ARC 112	Construction Materials and Methods	3	2	0	4
ARC 250	Survey of Architecture	3	0	0	3
CIS 110	Introduction to Computers	2	2	0	3
	Social/Behavioral Science Elective	3	0	0	3
	Total	12	10	0	16
Spring - 1st year					
ARC 113	Residential Arch Technology	1	6	0	3
ARC 114	Architectural CAD	1	3	0	2
ARC 114A	Architectural CAD Lab	0	3	0	1
ARC 131	Building Codes	2	2	0	3
ENG 111	Expository Writing	3	0	0	3
MAT 121	Algebra/Trigonometry I	2	2	0	3
	Total	9	16	0	15
Fall - 2nd year					
ARC 119	Structural Drafting	2	2	0	3
ARC 211	Light Construction Technology	1	6	0	3
ARC 220	Adv Architectural CAD	1	3	0	2
ARC 240	Site Planning	2	2	0	3
CIV 230	Construction Estimating	2	3	0	3
ENG 114	Prof. Research and Reporting (Preferred)	3	0	0	3
	OR ENG 112 Argument-Based Research	3	0	0	3
	OR ENG 113 Literature-Based Research	3	0	0	3
	Total	11	16	0	17
Spring - 2nd year					
ARC 132	Specifications and Contracts	2	0	0	2
ARC 213	Design Project	2	6	0	4
ARC 230	Environmental Systems	3	3	0	4
ARC 235	Architectural Portfolio	2	3	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	12	12	0	16
	Grand Total	44	54	0	64

Co-op Option: Qualified students may elect to take up to 2 credit hours of cooperative education in place of ARC 132.

ASSOCIATE DEGREE NURSING
A.A.S. Program (A45110)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science Degree is awarded to graduates of this curriculum.

The Associate Degree Nursing curriculum provides knowledge, skills, and strategies to integrate safety and quality into nursing care, to practice in a dynamic environment, and to meet individual needs which impact health, quality of life, and achievement of potential. Course work includes and builds upon the domains of healthcare, nursing practice, and the holistic individual. Content emphasizes the nurse as a member of the interdisciplinary team providing safe, individualized care while employing evidence-based practice, quality improvement, and informatics.   Graduates of this program are eligible to apply to take the National Council Licensure Examination (NCLEX-RN). Employment opportunities are vast within the global health care system and may include positions within acute, chronic, extended, industrial, and community health care facilities.

GENERAL EDUCATION COURSES: ....SHC

English/Communications:

ENG 111	Expository Writing	3
ENG 112	Argument-Based Research	3
OR		
ENG 113	Literature-Based Research	3
OR		
ENG 114	Prof Research & Reporting	3

Humanities/Fine Arts:

Elective	....	3

Natural Sciences/Mathematics:

BIO 168	Anatomy and Physiology I....................................	4
BIO 169	Anatomy and Physiology II	4

Social/Behavioral Sciences:

PSY 150	General Psychology	3

MAJOR COURSES:

BIO 275	Microbiology..	4
CIS 111	Basic PC Literacy...	2
NUR 111	Intro to Health Concepts	8
NUR 112	Health-Illness Concepts	5
NUR 113	Family Health Concepts	5
NUR 114	Holistic Health Concepts	5
NUR 211	Health Care Concepts...	5
NUR 212	Health System Concepts	5
NUR 213	Complex Health Concepts	10
PSY 241	Developmental Psych...	3

Total Credit Hours Required 72

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS 080	Computing Fundamentals....................................	3
ENG 090	Composition Strategies.......................................	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050...........................	5
RED 090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Associate Degree Nursing • A45110 Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
NUR 111	Intro to Health Concepts	4	6	6	8
BIO 168	Anatomy & Physiology I	3	3	0	4
PSY 150	General Psychology	3	0	0	3
CIS 111	Basic PC Literacy	1	2	0	2
	Total	11	11	6	17
Spring - 1st year					
NUR 112	Health-Illness Concepts	3	0	6	5
NUR 114	Holistic Health Concepts	3	0	6	5
BIO 169	Anatomy & Physiology II	3	3	0	4
PSY 241	Developmental Psychology	3	0	0	3
	Total	12	3	12	17
Summer - 1st year					
NUR 212	Health System Concepts	3	0	6	5
ENG 111	Expository Writing	3	0	0	3
	Total	6	0	6	8
Fall - 2nd year					
NUR 113	Family Health Concepts	3	0	6	5
NUR 211	Health Care Concepts	3	0	6	5
BIO 275	Microbiology	3	3	0	4
	Humanities Elective	3	0	0	3
	Total	12	3	12	17
Spring - 2nd year					
NUR 213	Complex Health Concepts	4	3	15	10
ENG 113	Literature-Based Research (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 114 Prof Research & Reporting	3	0	0	3

(Students considering transfer to a four-year university should take ENG 113)

	Total	7	3	15	13
	Grand Total	48	20	51	72

Associate Degree Nursing • A45110 Suggested Prog. Sequence Evening

		Class	Lab	Clin/WkExp	Credit
Spring - 1st year					
NUR 111 AB	Intro to Health Concepts	2	3	3	4
BIO 168	Anatomy & Physiology I	3	3	0	4
CIS 111	Basic PC Literacy	1	2	0	2
	Total	6	8	3	10
Summer - 1st year					
NUR 111 BB	Intro to Health Concepts	2	3	3	4
BIO 169	Anatomy & Physiology II	3	3	0	4
PSY 150	General Psychology	3	0	0	3
	Total	8	6	3	11
Fall - 1st year					
NUR 112	Health-Illness Concepts	3	0	6	5
NUR 114	Holistic Health Concepts	3	0	6	5
PSY 241	Developmental Psychology	3	0	0	3
	Total	9	0	12	13
Spring - 2nd year					
NUR 211	Health Care Concepts	3	0	6	5
NUR 212	Health System Concepts	3	0	6	5
ENG 111	Expository Writing	3	0	0	3
	Total	9	0	12	13
Summer - 2nd year					
NUR 113	Family Health Concepts	3	0	6	5
BIO 275	Microbiology	3	3	0	4
	Total	6	3	6	9
Fall - 2nd year					
NUR 213 AB	Complex Health Concepts	2	2	7	5
	Humanities Elective	3	0	0	3
	Total	5	2	7	8
Spring - 3rd year					
NUR 213 BB	Complex Health Concepts	2	1	8	5
ENG 113	Literature-Based Research (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 114 Prof Research & Reporting	3	0	0	3

(Students considering transfer to a four-year university should take ENG 113)

	Total	5	1	8	8
	Grand Total	48	20	51	72

ASSOCIATE DEGREE NURSING
Hickory RIBN Articulation Agreement
A.A.S. Program (A45110RB)

Catawba Valley Community College
Associate Degree in Nursing
And
Lenoir-Rhyne University
Bachelors of Science Degree with a Major in Nursing

This articulation agreement between Catawba Valley Community College (CVCC) and Lenoir-Rhyne University (LRU) allows graduates of Hickory RIBN to earn both an Associate Degree in Nursing from CVCC and a Bachelor of Science Degree with a Major in Nursing from LRU in 10 semesters through dual admission and continued enrollment. Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion of the A.A.S. portion is seven semesters full-time attendance. During this time students will be dually enrolled in CVCC and LRU. The Associate in Applied Science Degree is awarded to graduates of this curriculum, after which students will be eligible to take the NCLEX. The remaining three semesters will be taken at Lenoir-Rhyne University for a total of 10 program semesters.

Non-nursing courses completed at CVCC for the first three years will, as designated, satisfy course requirements towards the Bachelor of Science degree.

All courses designated by **(LRU/BS)** shown in the CVCC sequence will be completed at LRU for the first three years of Hickory RIBN. A total of 128 semester hours are required for students to complete their bachelors of science degree with a major in Nursing.

All courses designated by **(BS)** will be taken on CVCC's campus, and will be credited toward the bachelor of science degree.

Nursing students will enroll in NUR 300, Transition to Professional Practice (3 SHC), during the ninth semester. Successful completion of this course results in the awarding of a 39 semester hour block of credit.

GENERAL EDUCATION COURSES: ....SHC

English/Communications:
ENG 111 Expository Writing...3
ENG 113 Literature-Based Research 3

Humanities/Fine Arts:
Elective 3

Natural Sciences/Mathematics:
BIO 168 Anatomy and Physiology I....................................4
BIO 169 Anatomy and Physiology II 4

Social/Behavioral Sciences:
PSY 150 General Psychology 3

MAJOR COURSES:
BIO 275 Microbiology...4
CIS 111 Basic PC Literacy...2
NUR 111 Intro to Health Concepts 8
NUR 112 Health-Illness Concepts 5
NUR 113 Family Health Concepts 5
NUR 114 Holistic Health Concepts 5
NUR 211 Health Care Concepts..5
NUR 212 Health System Concepts 5
NUR 213 Complex Health Concepts 10
PSY 241 Developmental Psych...3

Total Credit Hours Required 72

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals...3
ENG 090 Composition Strategies..3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, ...5
RED 090 Improved College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Associate Degree Nursing/RIBN • A45110RB
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
BIO	168	Anatomy & Physiology I	3	3	0	4
CHM	131	Introduction to Chemistry **(BS)**	3	0	0	3
CHM	131A	Introcudtion to Chemistry Lab **(BS)**	0	3	0	1
ENG	111	Expository Writing	3	0	0	3
PSY	150	General Psychology	3	0	0	3
FYE	191	First Year Experience I **(LRU/BS)**				3
		Total	12	6	0	17
Spring - 1st year						
BIO	169	Anatomy & Physiology II	3	3	0	4
CIS	110	Introduction to Computers **(BS)**	2	0	0	3
		OR				
CIS	111	Basic PC Literacy AND	3	2	0	2
		PED (1 Hour Activity) **(BS)**	0	2	0	1
MAT	151	Statistics I **(BS)**	3	0	0	3
MAT	151A	Statistics I Lab **(BS)**	0	2	0	1
PSY	241	Developmental Psychology	3	0	0	3
FYE	192	First Year Experience II **(LRU/BS)**				3
		Total	11/12	5/6	0	17
Fall - 2nd year						
NUR	111	Intro to Health Concepts	4	6	6	8
BIO	275	Microbiology	3	3	0	4
		Foreign Language **(LRU/BS)**				3
		Total	7	9	6	15
Spring - 2nd year						
NUR	112	Health-Illness Concepts	3	0	6	5
NUR	114	Holistic Health Concepts	3	0	6	5
HEA	110	Personal Health/Wellness **(BS)**	3	0	0	3
		Foreign Language **(LRU/BS)**				3
		Total	9	0	12	16
Summer - 2nd year						
NUR	212	Health System Concepts	3	0	6	5
ENG	113	Literature-Based Research	3	0	0	3
		Total	6	0	6	8
Fall - 3rd year						
NUR	113	Family Health Concepts	3	0	6	5
NUR	211	Health Care Concepts	3	0	6	5
REL	100	Christian Faith **(LRU/BS)**				3
		Fine Arts Elective	3	0	0	3
		Total	9	0	12	16
Spring 3rd year						
NUR	213	Complex Health Concepts	4	3	15	10
COM	110	Introduction to Communication **(BS)**	3	0	0	3
		OR				
COM	231	Public Speaking **(BS)**	3	0	0	3
SOC	XXX	Sociology **(LRU/BS)**				3
		Total	7	3	15	16
		Grand Total	61/62	23/24	51	105

• Semester Hour Totals include courses taken at Lenoir Rhyne

Note: The following courses will be taken at Lenoir-Rhyne University upon completion of the A.A.S., at CVCC.

Summer - 3rd year			
NUR	202	Assessment of Health Status **(LRU)**	3
NUR	435	Analytical Methods for Evidence-Based Practice **(LRU)**	3
		Total	6
Fall 4th year			
NUR	300	Transition to Professional Practice **(LRU)**	3
NUR	455	Health Promotion with Populations & Families **(LRU)**	3
NAT	388	Environmental Science-Level II **(LRU)**	3
		Humanities Level I **(LRU)**	3
		Total	12
Spring 4th year			
NUR	456	Concepts of Leadership in Nursing **(LRU)**	3
NUR	477	Applied Health Care **(LRU)**	4
HSB	388	Level II **(LRU)**	3
		OR	
HUM	388	Level II **(LRU)**	3
		NUR Elective-Select Topics **(LRU)**	2
		Total	12

ASSOCIATE in GENERAL EDUCATION
A.G.E. Program (A10300)

The Associate in General Education curriculum is designed for the academic enrichment of students who wish to broaden their education, with emphasis on personal interest, growth and development. Course work includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition. Opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic use of computers will be provided. Through these skills, students will have a sound base for lifelong learning. Graduates are prepared for advancements within their field of interest and become better qualified for a wide range of employment opportunities.

*All courses in the program are college-level courses. Many of the courses are equivalent to college transfer courses; however, the program is not principally designed for college transfer.

GENERAL EDUCATION CORE   **(15 SHC)**

The general education core includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition. Within the core, colleges must include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic use of computers (SACS Criteria, 4.2.2).

English Composition (6 SHC)

Humanities/Fine Arts (3 SHC)

Select courses from the following discipline areas: music, art, drama, dance, foreign languages, interdisciplinary humanities, literature, philosophy and religion.

Social/Behavioral Sciences (3 SHC)

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

Natural Sciences/Mathematics (3 SHC)

Mathematics
Select courses from the following discipline areas: college algebra, trigonometry, calculus, computer science, and statistics.
or
Natural Sciences
Select courses from the following discipline areas: astronomy, biology, chemistry, earth sciences, physics, and/or general science.

OTHER REQUIRED HOURS   **(49-50 SHC)**

Other required hours include additional general education and professional courses. A maximum of 7 SHC in health, physical education, college orientation, and/or study skills may be included as other required hours.

TOTAL SEMESTER HOURS CREDIT (SHC)
IN PROGRAM: **64-65**

AUTOMOTIVE SYSTEMS TECHNOLOGY
A.A.S. Program (A60160)

Courses required to meet graduation requirements for the Associate in Applied Science Degree are offered during day hours. Courses required to meet graduation requirements for the Diploma are offered during afternoon and evening hours. Minimum time for completion: Day--five semesters full-time attendance; Evening--five semesters part-time attendance. The Associate in Applied Science degree or Diploma is awarded graduates of this curriculum. The Automotive Systems Technology curriculum prepares individuals for employment as Automotive Service Technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field. Classroom and lab experiences integrate technical and academic course work. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/transaxles, engine repair, climate control, and manual drive trains. Upon completion of this curriculum, students should be prepared to take the ASE exams and be ready for full-time employment in dealerships and repair shops in the automotive service industry. The Automotive Systems Technology program is ASE Accredited by the National Automotive Technicians Education Foundation.

GENERAL EDUCATION COURSES: ....SHC

English/Communications:
ENG   111   Expository Writing 3
ENG   114   Prof Research & Reporting 3
    OR
ENG 112   Argument-Based Research 3
    OR
ENG 113   Literature-Based Research 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
    OR
MAT 161   College Algebra 3
MAT 161A College Algebra Lab 1
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
AUT   116   Engine Repair 3
AUT   116A   Engine Repair Lab 1
AUT   141   Suspension & Steering Sys 3
AUT   141A   Suspension & Steering Lab 1
AUT   151   Brake Systems 3
AUT   151A   Brake Systems Lab 1
AUT   163   Adv Auto Electricity 3
AUT   163A   Adv Auto Electricity Lab 1
AUT   181   Engine Performance 1 3
AUT   181A   Engine Performance 1 Lab 1
AUT   183   Engine Performance 2 4
AUT   212   Auto Shop Management 3
AUT   221   Auto Transm/Transaxles 3
AUT   221A   Auto Transm/Transax Lab 1
AUT   231   Man Trans/Axles/Drtrains 3
AUT   231A   Man Trans/Ax/Drtrains Lab 1
AUT   281   Adv Engine Performance 3
COE   110   World of Work 1
TRN   110   Intro to Transport Tech 2
TRN   120   Basic Transp Electricity 5
TRN   140   Transp Climate Control 2
TRN   140A   Transp Climate Cont Lab 2
TRN   170   Pc Skills for Transp 2

Co-op Option: Qualified students may elect to take up to 7 credit hours of cooperative education in place of AUT 116A, AUT 141A, AUT 151A, AUT 163A, AUT 181A, AUT 221A, or AUT 231A.

Total Credit Hours Required 67/68

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals 3
ENG   090   Composition Strategies 3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Automotive Systems Technology • A60160
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
AUT 116 Engine Repair (1st 8 weeks)	2	3	0	3
AUT 116A Engine Repair Lab (1st 8 weeks)	0	3	0	1
AUT 181 Engine Performance I (2nd 8 weeks)	2	3	0	3
AUT 181A Engine Performance I Lab (2nd 8 weeks)	0	3	0	1
TRN 110 Intro to Transport Tech	1	2	0	2
TRN 120 Basic Transp Electricity	4	3	0	5
TRN 170 Pc Skills for Transp	1	2	0	2
Total	10	19	0	17
Spring - 1st year				
AUT 183 Engine Performance II (1st 8 weeks)	2	6	0	4
AUT 151 Brake Systems (2nd 8 weeks)	2	3	0	3
AUT 151A Brake Systems Lab (2nd 8 weeks)	0	3	0	1
AUT 163 Adv Auto Electricity	2	3	0	3
AUT 163A Adv Auto Electricity Lab	0	3	0	1
COE 110 World of Work	1	0	0	1
Total	6	18	0	13
Summer - 1st year				
ENG 111 Expository Writing	3	0	0	3
Social/Behavioral Science Elective	3	0	0	3
Total	6	0	0	6
Fall - 2nd year				
AUT 141 Suspension & Steering Sys (2nd 8 Weeks)	2	3	0	3
AUT 141A Suspension & Steering Lab (2nd 8 Weeks)	0	3	0	1
AUT 212 Auto Shop Management	3	0	0	3
AUT 281 Adv Engine Performance	2	2	0	3
TRN 140 Transp Climate Control (1st 8 weeks)	1	2	0	2
TRN 140A Transp Climate Cont Lab (1st 8 weeks)	1	2	0	2
Total	9	12	0	14
Spring - 2nd year				
AUT 221 Auto Transm/Transaxles (2nd 8 Weeks)	2	3	0	3
AUT 221A Auto Transm/Transaxles Lab (2nd 8 Weeks)	0	3	0	1
AUT 231 Man Trans/Axles/Drtrains (1st 8 weeks)	2	3	0	3
AUT 231A Man Trans/Axles/Drtrains Lab (1st 8 weeks)	0	3	0	1
MAT 115 Mathematical Models	2	2	0	3
OR MAT 161 College Algebra	3	0	0	3
MAT 161A College Algebra Lab	0	2	0	1
Total	6/7	14	0	11/12
Summer - 2nd year				
ENG 114 Prof. Research & Reporting (Preferred)	3	0	0	3
OR ENG 112 Argument-Based Research	3	0	0	3
OR ENG 113 Literature-Based Research	3	0	0	3
Humanities/Fine Art Elective	3	0	0	3
Total	6	0	0	6
Grand Total	43/44	63	0	67/68

Co-op Option: Qualified students may elect to take up to 7 credit hours of cooperation education in place of AUT 116A, AUT 141A, AUT 151A, AUT 163A, AUT 181A, AUT 221A, or AUT 231A.

AUTOMOTIVE SYSTEMS TECHNOLOGY
Diploma Program (D60160)

GENERAL EDUCATION COURSES: ....SHC
English/Communications:
ENG   111   Expository Writing 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
MAJOR COURSES:
AUT   116   Engine Repair 3
AUT   116A   Engine Repair Lab 1
AUT   141   Suspension & Steering Sys...................................3
AUT   141A   Suspension & Steering Lab 1
AUT   151   Brake Systems 3
AUT   151A   Brake Systems Lab 1
AUT   163   Adv Auto Electricity 3
AUT   181   Engine Performance 1 3
AUT   181A   Engine Performance 1 Lab 1
AUT   183   Engine Performance 2 4
AUT   221   Auto Transm/Transaxles 3
AUT   221A   Auto Transm/Transax Lab 1
AUT   231   Man Trans/Axles/Drtrains 3
AUT   231A   Man Trans/Ax/Drtrains Lab 1
COE   110   World of Work 1
TRN   110   Intro to Transport Tech..2
TRN   120   Basic Transp Electricity 5
TRN   140   Transp Climate Control 2
TRN   140A   Transp Climate Cont Lab 2

Automotive Systems Technology
Co-op Option: Qualified students may elect to take up to 4 credit hours of cooperative education in place of AUT 116A, AUT 141A, AUT 151A, AUT 181A, AUT 221A, or AUT 231A.

Total Credit Hours Required 48

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals....................................3
DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
ENG   090   Composition Strategies.......................................3
RED   090   Improved College Reading..................................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Automotive Systems Technology - Diploma • D60160
Suggested Program Sequence Evening

Fall - 1st year					
AUT 116	Engine Repair (2nd 8 Wks)	2	3	0	3
AUT 116A	Engine Repair Lab (2nd 8 Wks)	0	3	0	1
TRN 110	Intro to Transport Tech	1	2	0	2
TRN 120	Basic Transp Electricity (1st 8 Wks)	4	3	0	5
	Total	7	11	0	11
Spring - 1st year					
AUT 151	Brake Systems (1st 8 Wks)	2	3	0	3
AUT 151A	Brake Systems Lab (1st 8 Wks)	0	3	0	1
AUT 163	Adv Auto Electricity (2nd 8 Wks)	2	3	0	3
MAT 115	Mathematical Models	2	2	0	3
	Total	6	11	0	10
Fall - 2nd year					
AUT 181	Engine Performance I (1st 8 Wks)	2	3	0	3
AUT 181A	Engine Performance I Lab (1st 8 Wks)	0	3	0	1
AUT 231	Man Trans/Axles/Drtrains (2nd 8 Wks)	2	3	0	3
AUT 231A	Man Trans/Axles/Drtrains Lab (2nd 8 Wks)	0	3	0	1
	Total	4	12	0	8
Spring - 2nd year					
AUT 221	Auto Transm/Transaxles (1st 8 Wks)	2	3	0	3
AUT 221A	Auto Transm/Transaxles Lab (1st 8 Wks)	0	3	0	1
AUT 183	Engine Performance II (2nd 8 Wks)	2	6	0	4
ENG 111	Expository Writing	3	0	0	3
	Total	7	12	0	11
Fall - 3rd year					
AUT 141	Suspension & Steering (2nd 8 Wks)	2	3	0	3
AUT 141A	Suspension & Steering Lab (2nd 8 Wks)	0	3	0	1
TRN 140	Transp Climate Control (1st 8 weeks)	1	2	0	2
TRN 140A	Transp Climate Cont Lab (1st 8 weeks)	1	2	0	2
	Total	4	10	0	8
	Grand Total	28	56	0	48

AUTOMOTIVE SYSTEMS TECHNOLOGY
Under Car Services Concentration Cert. Program (C60160)

Major Courses ....SHC
AUT   141   Suspension & Steering Sys 3
AUT   141A   Suspension & Steering Lab 1
AUT   151   Brake Systems 3
AUT   151A   Brake Systems Lab..1
TRN   110   Intro to Transport Tech 2
TRN   120   Basic Transp Electricity 5

Total Credit Hours Required 15

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals...................................3
DMA 010, DMA 020, DMA 030 3
RED   080   Intro to College Reading 4

* Developmental course work (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computer. Please refer to the Course Descriptions section for prerequisite course information.

Automotive Systems Technology - Under Car Services Concentration Certificate Program (C60160) Suggested Sequence

Fall - 1st Year					
TRN 110	Intro to Transport Tech	1	2	0	2
TRN 120	Basic Transp Electricity	4	3	0	5
AUT 141	Suspension & Steering Sys	2	3	0	3
AUT 141A	Suspension & Steering Lab	0	3	0	1
	Total	7	11	0	11
Spring - 1st Year					
AUT 151	Brake Systems	2	3	0	3
AUT 151A	Brake Systems Lab	0	3	0	1
	Total	2	6	0	4
	Grand Total	9	17	0	15

Co-op Option: Qualified students may elect to take up to 2 credit hours of cooperation education in place of AUT 141A, AUT 151A.

BASIC LAW ENFORCEMENT TRAINING
Certificate Program (C55120)

This course is designed, developed, monitored, and constantly updated by the Criminal Justice Training and Standards Division of the North Carolina Department of Justice. Minimum time for completion is approximately six months. Classes meet during evening hours and on Saturdays.
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; investigative, patrol, custody, and court procedures; emergency responses; and ethics and community relations. Successful graduates receive a curriculum certificate and are qualified to take certification examinations mandated by the North Carolina Criminal Justice Education and Training Standards Commission and/or the North Carolina Sheriffs' Education and Training Standards Commission.

The application cycle for the Fall class begins in March and ends in June, with the application cycle for the Spring class beginning in August and ending in November. Contact the Law Enforcement Training Director at 828-327-7000, extension 4448 for further information on the application process and to receive an application packet.

MAJOR COURSES: ....SHC

CJC 100 Basic Law Enforcement Training 19
Total Credit Hours Required.......................................19

BUSINESS ADMINISTRATION
A.A.S. Program (A25120)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day -- four semesters full-time attendance; Evening -- will vary according to semester load of student (usually eight to nine semesters.) The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students will be provided with a fundamental knowledge of business functions, processes, and an understanding of business organizations in today's global economy. Course work includes business concepts such as accounting, business law, economics, management, and marketing. Skills related to the application of these concepts are developed through the study of computer applications, communication, team building, and decision making. Graduates are prepared for employment opportunities in governmental agencies, financial institutions, and large to small business or industry.

GENERAL EDUCATION COURSES:..SHC
English/Communications:
ENG 111 Expository Writing 3
ENG 112 Argument-Based Research 3
    OR ENG 113 Literature-Based Research 3
    OR ENG 114 Prof Research & Reporting 3
Humanities/Fine Arts:
Elective 3

Natural Sciences/Mathematics:
MAT 115 Mathematical Models...3
    OR MAT 161 College Algebra 3
        MAT 161A College Algebra Lab 1
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
ACC 120 Prin of Financial Acct...4
ACC 121 Principles in Managerial Acct..................................4
BUS 110 Introduction to Business 3
BUS 115 Business Law I 3
BUS 116 Business Law II 3
BUS 137 Principles of Management 3
BUS 240 Business Ethics...3
BUS 285 Business Managment Issues 3
CIS 110 Introduction to Computers 3
COE 110 World of Work 1
ECO 251 Prin of Microeconomics 3
ECO 252 Prin of Macroeconomics 3
MKT 120 Principles of Marketing 3
Business Electives 12

    Students are required to take 12 SHC from the following:
    BUS 125 Personal Finance......................................3
    BUS 139 Entrepreneurship I...................................3
    BUS 153 Human Resource Management................3
    BUS 230 Small Business Management...................3
    BUS 245 Entrepreneurship II 3
    BUS 253 Leadership and Mgt Skills......................3
    COE XXX Co-op Work Experience....................1-6
    CTS 130 Spreadsheet...3
    ETR 215 Law for Entrepreneurs 3
    ETR 220 Innovation and Creativity 3
    ETR 230 Entrepreneur Marketing 3
    MKT 123 Fundamentals of Selling 3
    MKT 220 Advertising & Sales Promotion 3
    MKT 221 Consumer Behavior................................3
    MKT 223 Customer Service...................................3

Co-op Option: Qualified students may elect to take up to 6 credit hours of cooperative education in place of 6 hours Business electives.

Total Credit Hours Required 66-67

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals..3
ENG 090 Composition Strategies..3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060,
    DMA 070, DMA 080...8
RED 090 Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Business Administration • A25120
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
BUS 110 Introduction to Business	3	0	0	3
BUS 137 Principles of Management	3	0	0	3
CIS 110 Introduction to Computers	2	2	0	3
ENG 111 Expository Writing	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
OR MAT 161 College Algebra	3	0	0	3
and MAT 161A College Algebra Lab	0	2	0	1
Total	13/14	4	0	15/16
Spring - 1st year				
ACC 120 Prin of Financial Acct	3	2	0	4
BUS 115 Business Law I	3	0	0	3
BUS 240 Business Ethics	3	0	0	3
MKT 120 Principles of Marketing	3	0	0	3
ENG 114 Prof Research & Reporting	3	0	0	3
OR ENG 112 or ENG 113				
Total	15	2	0	16
Fall - 2nd year				
ACC 121 Principles in Managerial Acct	3	2	0	4
BUS 116 Business Law II	3	0	0	3
ECO 251 Principles of Microeconomics	3	0	0	3
Business Elective	3	0	0	3
Business Elective	3	0	0	3
Social/Behavioral Science Elective	3	0	0	3
Total	18	2	0	19
Spring - 2nd year				
BUS 285 Business Management Issues	2	2	0	3
COE 110 World of Work	1	0	0	1
ECO 252 Principles of Macroeconomics	3	0	0	3
Business Elective	3	0	0	3
Business Elective	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	15	2	0	16
Grand Total	61/62	10	0	66/67

Business Administration • A25120 Suggested Prog Seq Evening

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
BUS 110 Introduction to Business	3	0	0	3
CIS 110 Introduction to Computers	2	2	0	3
ENG 111 Expository Writing	3	0	0	3
Total	8	2	0	9
Spring - 1st year				
BUS 137 Principles of Management	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
OR MAT 161 College Algebra	3	0	0	3
and MAT 161A College Algebra Lab	0	2	0	1
Total	5/6	2	0	6/7
Fall - 2nd year				
ACC 120 Prin of Financial Acct	3	2	0	4
BUS 115 Business Law I	3	0	0	3
Total	6	2	0	7
Spring - 2nd year				
BUS 240 Business Ethics	3	0	0	3
MKT 120 Principles of Marketing	3	0	0	3
ENG 114 Prof Research & Reporting	3	0	0	3
OR ENG 112 or ENG 113				
Total	9	0	0	9
Fall - 3rd year				
ACC 121 Principles in Managerial Acct	3	2	0	4
BUS 116 Business Law II	3	0	0	3
Business Elective	3	0	0	3
Total	9	2	0	10
Spring - 3rd year				
ECO 251 Principles of Microeconomics	3	0	0	3
Business Elective	3	0	0	3
Social/Behavioral Science Elective	3	0	0	3
Total	9	0	0	9
Fall - 4th year				
Business Elective	3	0	0	3
Business Elective	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	9	0	0	9
Spring - 4th year				
BUS 285 Business Management Issues	2	2	0	3
COE 110 World of Work	1	0	0	1
ECO 252 Principles of Macroeconomics	3	0	0	3
Total	6	2	0	7
Grand Total	61/62	10	0	66/67

Business Administration Diploma Program • D25120

GENERAL EDUCATION COURSES:..**SHC**
English/Communications:
ENG 111 Expository Writing 3
Social/Behavioral Sciences:
Elective 3
MAJOR COURSES:
ACC 120 Prin of Financial Acct...4
BUS 110 Introduction to Business......................................3
BUS 115 Business Law I...3
BUS 137 Principles of Management....................................3
BUS 240 Business Ethics..3
CIS 110 Introduction to Computers..................................3
COE 110 World of Work...1
ECO 251 Prin of Microeconomics.....................................3
MKT 120 Principles of Marketing......................................3
Business Electives...**6**
Business Diploma Electives - Must be selected from the following list:
ACC 121, BUS 116, BUS 125, BUS 153, BUS 230, BUS 253, CTS 130, COE XXX,
BUS 139, BUS 245, ECO 252, ETR 220, MKT 123, MKT 220, MKT 223.

Total Credit Hours Required **38**

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals....................................3
ENG 090 Composition Strategies......................................3
RED 090 Improved College Reading..................................4
*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Business Administration • D25120 Suggested Program Sequence

Fall - 1st year						
BUS	110	Introduction to Business	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
		Total	11	2	0	12
Spring - 1st year						
ACC	120	Prin of Financial Acct	3	2	0	4
BUS	115	Business Law I	3	0	0	3
BUS	240	Business Ethics	3	0	0	3
MKT	120	Principles of Marketing	3	0	0	3
		Total	12	2	0	13
Fall - 2nd year						
ECO	251	Principles of Microeconomics	3	0	0	3
		Business Elective	3	0	0	3
		Business Elective	3	0	0	3
		Total	9	0	0	9
Spring - 2nd year						
COE	110	World of Work	1	0	0	1
		Social/Behavioral Science Elective	3	0	0	3
		Total	4	0	0	4
		Grand Total	36	4	0	38

BUSINESS ADMINISTRATION General Cert. Prog. (C2512001)

MAJOR COURSES: **SHC**
BUS 110 Introduction to Business......................................3
BUS 115 Business Law I...3
BUS 137 Principles of Management....................................3
MKT 120 Principles of Marketing......................................3
Total Credit Hours Required **12**

Business Administration - General Certificate (C2512001)

Fall - 1st year						
BUS	110	Intro to Business	3	0	0	3
MKT	120	Prin of Marketing	3	0	0	3
		Total	6	0	0	6
Spring - 1st year						
BUS	115	Business Law I	3	0	0	3
BUS	137	Prin of Management	3	0	0	3
		Total	6	0	0	6
		Grand Total	12	0	0	12

BUSINESS ADMINISTRATION Advanced Certificate #1 (C2512002)

MAJOR COURSES: **SHC**
BUS 110 Introduction to Business.......................................3
BUS 115 Business Law I..3
BUS 137 Principles of Management....................................3
ACC 120 Principles of Financial Acct 3
Total Credit Hours Required **12**

Business Administration - Advanced Certificate #1 (C2512002)

Fall - 1st year						
BUS	110	Intro to Business	3	0	0	3
BUS	137	Prin of Management	3	0	0	3
		Total	6	0	0	6
Spring - 1st year						
ACC	120	Prin of Financial Acct	3	2	0	4
BUS	115	Business Law I	3	0	0	3
		Total	6	0	0	7
		Grand Total	12	2	0	13

BUSINESS ADMINISTRATION
Advanced Certificate #2   (C2512003)

MAJOR COURSES: **SHC**
ACC 120 Prin of Financial Acct...4
ACC 121 Principles of Managerial Acct...............................4
CIS 110 Introduction to Computers..................................3
ECO 251 Principles of Microeconomics.............................3
ECO 252 Principles of Macroeconomics............................3
Total Credit Hours Required **17**

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals....................................3
RED 090 Improved College Reading..................................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Business Administration - Advanced Certificate #2 (C251003)

Fall - 1st year						
ACC	120	Prin of Financial Acct	3	2	0	4
CIS	110	Introduction to Comptuers	2	2	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
		Total	8	4	0	10
Spring - 1st year						
ACC	121	Principles of Managerial Acct	3	2	0	4
ECO	252	Principles of Macroeconomics	3	0	0	3
		Total	6	0	0	7
		Grand Total	14	6	0	17

BUSINESS ADMINISTRATION
Customer Service Certificate Program (C2512004)

MAJOR COURSES: **SHC**
BUS 110 Introduction to Business.......................................3
MKT 120 Principles of Marketing.......................................3
MKT 221 Consumer Behavior...3
MKT 223 Customer Service..3
Total Credit Hours Required **12**

Business Administration - Customer Service Cert (C2512004)

Fall - 1st year						
BUS	110	Intro to Business	3	0	0	3
MKT	223	Customer Services	3	0	0	3
		Total	6	0	0	6
Spring - 1st year						
MKT	120	Prin of Marketing	3	0	0	3
MKT	221	Consumer Behavior	3	0	0	3
		Total	6	0	0	6
		Grand Total	12	0	0	12

BUSINESS ADMINISTRATION
Marketing Certificate Program (C2512005)

MAJOR COURSES: **SHC**
BUS 110 Introduction to Business.......................................3
MKT 120 Principles of Marketing.......................................3
MKT 123 Fundamentals of Selling......................................3
MKT 220 Advertising & Promotion......................................3
Total Credit Hours Required **12**

Business Administration - Marketing Certificate (C25120)

Fall - 1st year						
BUS	110	Intro to Business	3	0	0	3
MKT	123	Fundamentals of Selling	3	0	0	3
		Total	6	0	0	6
Spring - 1st year						
MKT	120	Prin of Marketing	3	0	0	3
MKT	220	Advertising & Promotion	3	0	0	3
		Total	6	0	0	6
		Grand Total	12	0	0	12

COMPUTER ENGINEERING TECHNOLOGY
A.A.S. Program (A40160)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.
The Computer Engineering Technology curriculum provides the skills required to install, service, and maintain computers, peripherals, networks, and microprocessor and computer controlled equipment. It includes training in both hardware and software, emphasizing operating systems concepts to provide a unified view of computer systems. Course work includes mathematics, physics, electronics, digital circuits, and programming, with emphasis on the operation, use, and interfacing of memory and devices to the CPU. Additional topics may include communications, networks, operating systems, programming languages, Internet configuration and design, and industrial applications. Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring a knowledge of electronic and computer systems. Graduates may also qualify for certification in electronics, computers, or networks.

GENERAL EDUCATION COURSES:...SHC
English/Communications:..
ENG 111 Expository Writing...3
ENG 114 Prof Research & Reporting 3
   OR
ENG 112 Argument-Based Research...3
   OR
ENG 113 Literature-Based Research 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT 121 Algebra/Trigonometry I 3
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
CET 111 Computer Upgrade/Repair I..3
CIS 110 Introduction to Computers..3
CSC 134 C++ Programming...3
DFT 117 Technical Drafting...2
EGR 110 Intro to Engineering Tech..2
ELC 138 DC Circuit Analysis 3
ELC 139 AC Circuit Analysis 3
ELC 229 Applications Project 2
ELN 131 Semiconductor Applications 4
ELN 132 Linear IC Applications 4
ELN 133 Digital Electronics 4
ELN 233 Microprocessor Systems 4
MAT 122 Algebra/Trigonometry II 3
NET 125 Networking Basics 3
PHY 131 Physics-Mechanics...4
CET Electives 6
   Students are required to take a minimum of 6 SHC from the following:
   CET 211 Computer Upgrade/Repair II.......................................3
   CSC 139 Visual BASIC Prog 3
   CSC 151 JAVA Programming...3
   CTS 130 Spreadsheet 3
   NOS 110 Operating System Concepts..3
   NOS 120 Linux/UNIX Single User 3
   PHY 133 Physics-Sound & Light...4
   WEB 110 Internet/Web Fundamentals 3

Co-op Option: Qualified students may elect to take 2 credit hours of cooperative education in place of ELC 229.
Physics Note: Students planning to transfer to a 4-year college should consider taking PHY 131 & PHY 133. Please see your advisor.
Total Credit Hours Required 68/69

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals...3
ENG 090 Composition Strategies 3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050.............................5
RED 090 Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer Engineering Technology • A40160
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
CIS 110 Introduction to Computers	2	2	0	3
CSC 134 C++ Programming	2	3	0	3
DFT 117 Technical Drafting	1	2	0	2
EGR 110 Intro to Engineering Technology	1	2	0	2
ELC 138 DC Circuit Analysis	2	3	0	3
MAT 121 Algebra/Trigonometry I	2	2	0	3
Total	10	14	0	16
Spring - 1st year				
ELC 139 AC Circuit Analysis	2	3	0	3
ELN 131 Semiconductor Applications	3	3	0	4
ENG 111 Expository Writing	3	0	0	3
MAT 122 Algebra/Trigonometry II	2	2	0	3
NET 125 Networking Basics	1	4	0	3
Total	11	12	0	16
Summer - 1st year				
ENG 114 Prof. Research and Reporting (Preferred)	3	0	0	3
OR ENG 112 Argument-Based Research	3	0	0	3
OR ENG 113 Literature-Based Research	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	6	0	0	6
Fall - 2nd year				
CET 111 Computer Upgrade/Repair I	2	3	0	3
ELN 132 Linear IC Applications	3	3	0	4
ELN 133 Digital Electronics	3	3	0	4
PHY 131 Physics-Mechanics	3	2	0	4
Total	11	11	0	15
Spring - 2nd year				
ELC 229 Applications Project	1	3	0	2
ELN 233 Microprocessor Systems	3	3	0	4
CET Elective	2	3	0	3
CET Elective	2	3	0	3/4
Social/Behavioral Science Elective	3	0	0	3
Total	11	12	0	15/16
Grand Total	49	49	0	68/69

Computer Engineering Technology • A40160
Suggested Program Evening Sequence

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
EGR 110	Intro to Engineering Technology	1	2	0	2
ELC 138	DC Circuit Analysis	3	3	0	4
MAT 121	Algebra/Trigonometry I	2	2	0	3
	Total	6	7	0	9
Spring - 1st year					
ELC 139	AC Circuit Analysis	3	3	0	4
MAT 122	Algebra/Trigonometry II	2	2	0	3
	Total	5	5	0	7
Summer - 1st year					
ENG 111	Expository Writing	3	0	0	3
	Social/Behavioral Science Elective	3	0	0	3
	Total	6	0	0	6
Fall - 2nd year					
DFT 117	Technical Drafting	1	2	0	2
ELN 131	Semiconductor Applications	3	3	0	4
	Total	4	5	0	6
Spring - 2nd year					
ELN 132	Linear IC Applications	3	3	0	4
ELN 133	Digital Electronics	3	3	0	4
	Total	6	6	0	8
Summer - 2nd year					
CIS 110	Introduction to Computers	2	2	0	3
ENG 114	Prof Research & Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	8	2	0	9
Fall - 3rd year					
CET 111	Computer Upgrade/Repair I	2	3	0	3
CSC 134	C++ Programming	2	3	0	3
	Total	4	6	0	6
Spring - 3rd year					
ELN 233	Microprocessor Systems	3	3	0	4
NET 125	Networking Basics	1	4	0	3
	Total	4	7	0	7
Fall - 4th year					
PHY 131	Physics-Mechanics	3	2	0	4
	CET Elective	2	3	0	3/4
	Total	5	5	0	7/8
Spring - 4th year					
ELC 229	Applications Project	1	3	0	2
	CET Elective	2	3	0	3/4
	Total	3	6	0	5/6
	Grand Total	51	49	0	70/71

COMPUTER INFORMATION TECHNOLOGY
A.A.S. Program (A25260)

Courses required to meet graduation requirements in this curriculum are offered during the day and online. The core courses are offered mostly online. Minimum time for completion: Day -- five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. The Computer Information Technology curriculum is designed to prepare graduates for employment with organizations that use computers to process, manage, and communicate information. This is a flexible curriculum that can be customized to meet community information systems needs. Course work will develop a student's ability to communicate complex technical issues related to computer hardware, software, and networks in a manner that computer users can understand. Classes cover computer operations and terminology, operating systems, database, networking, security, and technical support. Graduates should qualify for employment in entry-level positions with businesses, educational systems, and governmental agencies which rely on computer systems to manage information. Graduates should be prepared to sit for industry-recognized certification exams.

GENERAL EDUCATION COURSES: ....SHC
English/Communications:
ENG 111   Expository Writing 3
ENG 114   Prof Research & Reporting..3
   OR
ENG 113   Literature-Based Research 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT 140   Survey of Mathematics...3
MAT 140A Survey of Mathematics Lab....................................1
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
CIS 110   Introduction to Computers..3
CIS 115   Intro to Prog & Logic 3
COE XXX Co-op Work Experience...2
CTS 115   Info Sys Business Concept 3
CTS 120   Hardware/Software Support 3
CTS 130   Spreadsheet 3
CTS 285   Systems Analysis & Design..3
CTS 289   System Support Project 3
DBA 110   Database Concepts 3
DBA 115   Database Applications 3
DBA 120   Database Programming I 3
NET 125   Networking Basics...3
NOS 110   Operating System Concepts..3
NOS 130   Windows Single User 3
NOS 230   Windows Admin I...3
SEC 110   Security Concepts...3
Programming Elective 3
   Students must select one course from the following:
   CSC 134   C++ Programming 3
   CSC 139   Visual BASIC Prog..3
Program Elective 3
   COE XXX   Co-op Work Experience.............................2
   CET 211   Computer Upgrade/Repair II 3
   CIS 277   Network Design & Imp 3
   CSC 234   Adv C++ Programming 3
   CSC 239   Adv Visual BASIC Prog..............................3
   DBA 220   Oracle DB Programming I 3
   NET 126   Routing Basics 3
   NET 175   Wireless Technology....................................3
   NOS 120   Linux/UNIX Single User 3
   NOS 231   Windows Admin II..3
   NOS 244   Operating Sytem - AS/400...........................3
   SEC 150   Secure Communications 3
   SEC 160   Secure Admin I 3

Co-op Option: Qualified students may elect to take up to 3 additional credit hours of cooperative education in place of 3 hours program electives.

Total Credit Hours Required 69

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080   Computing Fundamentals...3
ENG 090   Composition Strategies..3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED 090   Improved College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer Information Technology Program Elective Pick List:CIS 277, CSC 234, CSC 239, DBA 220, NET 126, NOS 120, NOS 231, NOS 244, SEC 150, SEC 160, NET 175.

Computer Information Technology • A25260
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
CIS 115	Intro to Prog. & Logic	2	3	0	3
DBA 110	Database Concepts	2	3	0	3
NOS 110	Operating System Concepts	2	3	0	3
	Total	8	11	0	12
Spring - 1st year					
CSC 139/134	Visual Basic OR C++ Programming	2	3	0	3
DBA 115	Database Applications	2	2	0	3
CTS 120	Hardware/Software Support	2	3	0	3
COE XXX	Co-op Work Experience	0	0	20	2
NOS 130	Windows Single User	2	2	0	3
	Total	8	10	20	14
Summer - 1st year					
ENG 111	Expository Writing	3	0	0	3
MAT 140	Survey of Math	3	0	0	3
MAT 140A	Survey of Math Lab	0	2	0	1
	Social/Behavioral Science Elective	3	0	0	3
	Total	9	2	0	10
Fall - 2nd year					
CTS 130	Spreadsheet	2	2	0	3
CTS 285	Systems Analysis & Design	3	0	0	3
DBA 120	Database Programming I	2	2	0	3
NET 125	Networking Basics	1	4	0	3
NOS 230	Windows Admin I	2	2	0	3
SEC 110	Security Concepts	2	2	0	3
	Total	12	12	0	18
Spring - 2nd year					
CTS 115	Info Sys Business Concepts	3	0	0	3
CTS 289	System Support Project	1	4	0	3
ENG 114	Prof Research & Reporting	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Program Elective	3	0	0	3
	Total	10	6	0	15
	Grand Total	50	41	20	69

Computer Information Technology • A25260
Suggested Program Sequence Evening

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
SEC 110	Security Concepts	2	2	0	3
	Total	4	4	0	6
Spring - 1st year					
CTS 115	Info Sys Business Concepts	3	0	0	3
CSC 139/134	Visual Basic OR C++Programming	2	3	0	3
NOS 110	Operating Systems Concepts	2	3	0	3
	Total	7	6	0	9
Summer - 1st year					
ENG 111	Expository Writing	3	0	0	3
MAT 140	Survey of Math	3	0	0	3
MAT 140A	Survey of Math Lab	0	2	0	1
	Total	6	2	0	7
Fall - 2nd year					
CIS 115	Intro to Programming & Logic	2	3	0	3
CTS 130	Spreadsheet	2	2	0	3
DBA 110	Database Concepts	2	3	0	3
NET 125	Networking Basics	1	4	0	3
	Total	7	12	0	12
Spring - 2nd year					
DBA 115	Advance Database	2	2	0	3
NOS 130	Windows Single User	2	2	0	3
	Total	4	4	0	6
Summer - 2nd year					
ENG 114	Prof Research & Reporting	3	0	0	3
OR	ENG 133 Literature-Based Research	3	0	0	3
COE XXX	Co-op Work Experience	0	0	20	2
	Social/Behavioral Science Elective	3	0	0	3
	Total	6	0	20	8
Fall - 3rd year					
CTS 285	Systems Analysis & Design	3	0	0	3
DBA 120	Database Programming I	2	2	0	3
NOS 230	Windows Admin I	2	2	0	3
	Total	7	4	0	9
Spring - 3rd year					
CTS 289	System Support Project	1	4	0	3
CTS 120	Hardware/Software Support	2	3	0	3
	Total	3	7	0	6
Summer - 3rd year					
	Program Elective	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	3	0	0	6
	Grand Total	51	41	20	69

COMPUTER INFORMATION TECHNOLOGY
Certificate Program (C25260)

MAJOR COURSES:..SHC
CIS 110 Introduction to Computers 3
CTS 115 Info Sys Business Concept..3
CTS 130 Spreadsheet 3
DBA 110 Database Concepts 3
DBA 115 Database Applications 3

Total Credit Hours Required **18**
DEVELOPMENTAL COURSE REQUIREMENTS*

CTS 080 Computing Fundamentals..3
RED 080 Intro to College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer Information Technology (C25260)
Certificate Suggested Sequence

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
CTS 130	Spreadsheet	2	2	0	3
DBA 110	Database Concepts	2	3	0	3
	Total	6	7	0	9
Spring 1st year					
DBA 115	Database Applications	2	2	0	3
CTS 115	Info Sys Business Concept	2	3	0	3
	Total	4	5	0	6
	Grand Total	10	12	0	15

COMPUTER INFORMATION TECHNOLOGY
Database Certificate (C2526001)
Suggested Sequence

MAJOR COURSES:.. SHC
DBA 110 Database Concepts & Apps 3
DBA 115 Advance Database 3
DBA 120 Database Programming I 3
DBA 220 Oracle DB Programming II 3

Total Credit Hours Required **12**

Computer Information Technology-Database Certificate (C2526001)
Suggested Sequence

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
DBA 110	Database Concepts	2	3	0	3
	Total	2	3	0	3
Spring - 1st year					
DBA 115	Database Applications	2	2	0	3
	Total	2	2	0	3
Fall - 2nd year					
DBA 120	Database Programming I	2	2	0	3
	Total	2	2	0	3
Spring - 2nd year					
DBA 220	Oracle DB Programming II	2	3	0	3
	Total	2	3	0	3
	Grand Total	8	10	0	12

COMPUTER-INTEGRATED MACHINING TECHNOLOGY
A.A.S. Program (A50210)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. The The Associate in Applied Science Degree is awarded graduates of this curriculum. The Computer-Integrated Machining curriculum prepares students with the analytical, creative and innovative skills necessary to take a production idea from an initial concept through design, development and production, resulting in a finished product. Coursework may include manual machining, computer applications, engineering design, computer-aided drafting (CAD), computer-aided machining (CAM), blueprint interpretation, advanced computerized numeric control (CNC) equipment, basic and advanced machining operations, precision measurement and high-speed multi-axis machining. Graduates should qualify for employment as machining technicians in high-tech manufacturing, rapid-prototyping and rapid-manufacturing industries, specialty machine shops, fabrication industries, and high-tech or emerging industries such as aerospace, aviation, medical, and renewable energy, and to sit for machining certification examinations.

GENERAL EDUCATION COURSES: SHC
English/Communications:
ENG   111   Exxpository Writing 3
ENG   114   Prof Research & Reporting 3
       OR
ENG   112   Argument-Based Research....................................3
       OR
ENG   113   Literature-Based Research 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   121   Algebra/Trigonometry I 3
Social /Behavioral Sciences:
Elective 3

MAJOR COURSES:
CIS   111   Basic PC Literacy 2
       OR
CIS   110   Intro to Computers 3
MAC   122   CNC Turning 2
MAC   124   CNC Milling 2
MAC   131   Blueprint Reading/Mach I 2
MAC   132   Blueprint Reading/Mach II 2
MAC   141   Machining Applications I 4
MAC   142   Machining Applications II 4
MAC   143   Machining Appl III 4
MAC   151   Machining Calculations I. 2
MAC   222   Adv. CNC Turning 2
MAC   224   Adv. CVC Milling 2
MAC   231   CAM: CNC Turning...3
MAC   232   CAM: CNC Milling 3
MAC   233   Appl in CNC Machining...6
MAC   234   Adv Multi-Axis Machin 3
MAC   241   Jigs and Fixtures I 4
MAC   242   Jigs & Fixtures II 4
MEC   110   Intro to CAD/CAM...2
MEC   142   Physical Metallurgy...2

Co-op Option: Qualified students may elect to take 4 credit hours of cooperative education in place of MAC 242 or MEC 142.

Total Credit Hours Required 70/71

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Funamentals...3
ENG   090   Compositions Strategies 3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading..4
*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer-Integrated Machining Technology - A50210
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
MAC 131	Blueprint Reading/Mach. I	1	2	0	2
MAC 141	Machining Applications I (1st 8 Wks)	2	6	0	4
MAC 142	Machining Application II (2nd 8 Wks)	2	6	0	4
MAC 151	Machining Calculations I	1	2	0	2
CIS 111	Basic PC Literacy	1	2	0	2
OR	CIS 110 Intro to Computers	2	2	0	3
	Total	8	20	0	14/15
Spring - 1st year					
MAC 122	CNC Turning (1st 4 Wks)	1	3	0	2
MAC 222	Adv. CNC Turning (2nd 4 Wks)	1	3	0	2
MAC 132	Bluepring Reading Mach. II	1	2	0	2
MAC 124	CNC Milling (3rd 4 Wks)	1	3	0	2
MAC 224	Adv. CNC Milling (4th 4 Wks)	1	3	0	2
MAT 121	Algebra/Trigonometry I	2	2	0	3
	Total	7	16	0	13
Summer - 1st year					
ENG 111	Expository Writing	3	0	0	3
MEC 110	Intro to CAD/CAM	1	2	0	2
MAC 143	Machining Applications III	2	6	0	4
	Total	6	8	0	9
Fall - 2nd year					
MAC 231	CAM:CNC Turning	1	4	0	3
MAC 232	CAM:CNC Milling	1	4	0	3
MAC 241	Jigs and Fixtures I	2	6	0	4
	Humanities/Fine Arts Elective	3	0	0	3
	Total	7	14	0	13
Spring - 2nd year					
MAC 234	Adv Multi-Axis Machining	2	3	0	3
MAC 242	Jigs and Fixtures II	1	9	0	4
MEC 142	Physical Metallurgy	1	2	0	2
	Social/Behavioral Science Elective	3	0	0	3
	Total	7	14	0	12
Summer - 2nd year					
ENG 114	Literature-Based Research (Preferred)	3	0	0	3
OR	ENG 112 Prof Research & Reporting	3	0	0	3
OR	ENG 113 Argument-Based Research	3	0	0	3
MAC 233	Appl in CNC Machining	2	12	0	6
	Total	7	4	0	9
	Grand Total	40	84	20	70/71

Computer-Integrated Machining Technology Diploma (D50210)

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Exxpository Writing 3
Natural Sciences/Mathematics:
MAT   121   Algebra/Trigonometry I..3
MAJOR COURSES:
CIS   111   Basic PC Literacy 2
      OR
CIS   110   Intro to Computers..3
MAC   122   CNC Turning 2
MAC   124   CNC Milling 2
MAC   131   Blueprint Reading/Mach I 2
MAC   132   Blueprint Reading/Mach II 2
MAC   141   Machining Applications I 4
MAC   142   Machining Applications II 4
MAC   151   Machining Calculations I 2
MAC   222   Adv. CNC Turning 2
MAC   224   Adv. CVC Milling 2
MEC   110   Intro to CAD/CAM 2
*CIM/Coop ProgramElective...6
      COE   XXX   Co-op Work Experience................................1/4
      MAC   231   CAM: CNC Turning 3
      MAC   232   CAM: CNC Milling 3
      MAC   241   Jigs and Fixtures I 4
      MEC   142   Physical Metallurgy 2

Co-op Option: Qualified students may elect to take 4 credit hours of cooperative education in place of Programming electives.

Total Credit Hours Required 38/39

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals..3
ENG   090   Composition Strategies...3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading..4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer-Integrated Machining Technology - Diploma • D50210
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 111	Basic PC Literacy	1	2	0	2
OR					
CIS 110	Intro to Computers	2	2	0	3
MAC 131	Blueprint Reading/Mach I	1	2	0	2
MAC 141	Machining Applications I	2	6	0	4
MAC 142	Machining Applications II	2	6	0	4
MAC 151	Machining Calculations I	1	2	0	2
	Program Elective	3	0	0	3
	Total	10	18	0	17/18
Spring - 1st year					
MAC 122	CNC Turning (1st 4 Wks)	1	3	0	2
MAC 222	Adv. CNC Turning (2nd 4 Wks)	1	3	0	2
MAC 132	Blueprint Reading/Mach II	1	2	0	2
MAC 124	CNC Milling (3rd 4 Wks)	1	3	0	2
MAC 224	Adv. CNC Milling (4th 4 Wks)	1	3	0	2
MAT 121	Algebra/Trigonometry I	2	2	0	3
	Program Elective	3	0	0	3
	Total	10	16	0	16
Summer - 1st year					
ENG 111	Expository Writing	3	0	0	3
MEC 110	Intro to CAD/CAM	1	2	0	2
	Total	4	2	0	5
	Grand Total	24	36	0	38/39

Computer-Integrated Machining Technology - Diploma • D50210
Suggested Program Sequence Evening

Fall - 1st year					
MAC 131	Blueprint Reading/Mach I	1	2	0	2
MAC 141	Machining Applications I	2	6	0	4
MAC 151	Machining Calculations I	1	2	0	2
CIS 111	Basic PC Literacy	1	2	0	2
OR					
CIS 110	Intro to Computers	2	2	0	3
	Total	5/6	12	0	10/11
Spring - 1st year					
MAC 132	Blueprint Reading/Mach II	1	2	0	2
MAC 142	Machining Applications II	2	6	0	4
MEC 110	Intro to CAD/CAM	1	2	0	2
	Total	4	10	0	8
Fall - 2nd year					
MAC 122	CNC Turning	1	3	0	2
MAC 124	CNC Milling	1	3	0	2
MAT 121	Algebra/Trigonometry I	2	2	0	3
	Program Elective	3	0	0	3
	Total	7	8	0	10
Spring - 2nd year					
MAC 222	Adv. CNC Turning	1	3	0	2
MAC 224	Adv. CNC Milling	1	3	0	2
	Program Elective	3	0	0	3
	Total	5	6	0	7
Summer - 2nd year					
ENG 111	Expository Writing	3	0	0	3
	Total	3	0	0	3
	Grand Total	24/25	36	0	38/39

Computer-Integrated Machining Technology Cert. Prog. (C50210)
MAJOR COURSES:
MAC   122   CNC Turning 2
MAC   124   CNC Milling 2
MAC   131   Blueprint Reading/Mach I 2
MAC   141   Machining Applications I 4
MAC   151   Machining Calculations I...2
MEC   110   Intro to CAD/CAM...2

Total Credit Hours Required 14

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals...3
MAT   DMA 010, DMA 020, 030 3
RED   080   Intro to College Reading...4
*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer-Integrated Machining Technology
Certificate - Suggest Program Sequence Day (C50210)

Fall - 1st year					
MAC 122	CNC Turning	1	3	0	2
MAC 124	CNC Milling	1	3	0	2
MAC 131	Blueprint Reading/Mach I	1	2	0	2
MAC 141	Machining Applications I	2	6	0	4
MAC 151	Machining Calculations I	1	2	0	2
MEC 110	Intro to CAD/CAM	1	2	0	2
	Grand Total	7	18	0	14

Computer-Integrated Machining Technology
Certificate - Suggest Program Sequence Evening (C50210)

Fall - 1st year					
MAC 131	Blueprint Reading/Mach I	1	2	0	2
MAC 141	Machining Applications I	2	6	0	4
MAC 151	Machining Calculations I	1	2	0	2
	Total	4	10	0	8
Spring - 1st year					
MEC 110	Intro to CAD/CAM	1	2	0	2
MAC 122	CNC Turning	1	3	0	2
MAC 124	CNC Milling	1	3	0	2
	Total	3	8	0	6
	Grand Total	7	18	0	14

COMPUTER PROGRAMMING
A.A.S. Program (A25130)

Courses required to meet graduation requirements in this curriculum are offered during the day and online. The core courses are offered mostly online. Minimum time for completion: Day -- five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. 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, computer operators, systems technicians, or database specialists.

GENERAL EDUCATION COURSES:...SHC

English/Communications:
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
	OR		
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:
Elective 3

Natural Sciences/Mathematics:
MAT	140	Survey of Mathematics	3
MAT	140A	Survey of Mathematics Lab	1

Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
CIS	110	Introduction to Computers	3
CIS	115	Intro to Prog & Logic	3
CSC	138	RPG Programming	3
CSC	139	Visual BASIC Prog	3
CSC	141	Visual C++ Prog	3
CSC	238	Adv RPG Programming	3
CSC	239	Adv Visual BASIC Prog	3
CSC	289	Programming Capstone Project	3
CTS	115	Info Sys Business Concept	3
CTS	130	Spreadsheet	3
CTS	285	Systems Analysis & Design	3
DBA	110	Database Concepts	3
NET	125	Networking Basics	3
NOS	110	Operating System Concepts	3
NOS	244	Operating System - AS/400	3
SEC	110	Security Concepts	3
Programming Elective			3

Students must select 3 SHC from the following courses:
CSC	151	JAVA Programming	3
DBA	115	Database Applications	3
DBA	120	Database Programming	3
SGD	111	Introduction to SGD	3
SGD	112	SGD Design	3
SGD	114	3D Modeling	3

Programming Elective or Co-op 1-3

Students are required to take one (1) course from the following:
COE	XXX	Co-op Work Experience	1-3
CSC	151	JAVA Programming	3
DBA	115	Database Applications	3
DBA	120	Database Programming	3
SGD	111	Introduction to SGD	3
SGD	112	SGD Design	3
SGD	114	3D Modeling	3

Co-op Option: Qualified students may elect to take 1-3 credit hours of cooperative education in place of Programming elective.

OTHER REQUIRED COURSES:
ACA	111	College Student Success	1

Total Credit Hours Required 69-71

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer Programming • A25130
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
ACA	111	College Student Success	1	0	0	1
CIS	110	Introduction to Computers	2	2	0	3
CIS	115	Intro to Prog & Logic	2	3	0	3
DBA	110	Database Concepts & Apps	2	3	0	3
NET	125	Networking Basics	1	4	0	3
		Total	8	12	0	13
Spring - 1st year						
CSC	141	Visual C++ Prog	2	3	0	3
CTS	115	Info Sys Business Concepts	3	0	0	3
NOS	110	Operating Systems Concepts	2	3	0	3
NOS	244	Operating Systems - AS400	2	2	0	3
		Program Elective	3	0	0	3
		Total	12	8	0	15
Summer - 1st year						
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Math	3	0	0	3
MAT	140A	Survey of Math Lab	0	2	0	1
		Humanities/Fine Arts Elective	3	0	0	3
		Total	9	2	0	10
Fall - 2nd year						
CTS	130	Spreadsheet	2	2	0	3
CTS	285	Systems Analysis & Design	3	0	0	3
CSC	138	RPG Programming	2	3	0	3
CSC	139	Visual Basic Programming	2	3	0	3
SEC	110	Security Concepts	2	2	0	3
		Total	11	7	0	15
Spring - 2nd year						
ENG	114	Prof Research & Reporting	3	0	0	3
	OR	ENG 113 Literature-Based Research	3	0	0	3
CSC	289	Programming Capstone Project	1	4	0	3
CSC	238	Adv RPG Programming	2	3	0	3
CSC	239	Adv Visual Basic Programming	2	3	0	3
		Social/Behavioral Science Elective	3	0	0	3
		Co-op or Program Elective	0	0	0	1/3
		Total	11	10	0	16/18
		Grand Total	51	42	0	69/71

COMPUTER PROGRAMMING - Cert. Prog. (C25130)

MAJOR COURSES:..SHC
CIS	115	Intro to Prog & Logic	3
CSC	139	Visual BASIC Prog	3
CSC	141	Visual C++ Prog	3
CSC	239	Adv Visual Basic Prog	3

Total Credit Hours Required 12

DEVELOPMENTAL COURSE REQUIREMENTS*
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050.............................5

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer Programming - Cert. Suggested Sequence (C25130)

			Class	Lab		Credit
Fall - 1st year						
CIS	115	Intro to Prog & Logic	2	3	0	3
		Total	2	3	0	3
Spring - 1st year						
CSC	139	Visual BASIC Programming	2	3	0	3
CSC	141	Visual C++ Programming	2	3	0	3
		Total	4	6	0	6
Spring - 2nd year						
CSC	239	Adv Visual BASIC Programming	2	3	0	3
		Total	2	3	0	3
		Grand Total	8	12	0	12

COSMETOLOGY
Diploma Program (D55140)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. All courses, state hours, and state projects must be completed before graduation. Minimum time for completion: four semesters full-time attendance; nine semesters part-time attendance. The Diploma is awarded graduates of this curriculum.

The Cosmetology curriculum is designed to provide comptency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills. Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics. Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons, spas, nail salons, and related businesses. General Education Courses, including above developmental courses, English, Psychology, and Computer Literacy will be taught on the CVCC campus. Instruction and course materials are available in Spanish.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   102   Applied Communications II 3
Social/Behavioral Sciences:
PSY   150   General Psychology...3

MAJOR COURSES:
COS   111   Cosmetology Concepts I...4
    OR
COS   111AB   Cosmetology Concepts I-AB...............................2
COS   111BB   Cosmetology Concepts I-BB...............................2

COS   112   Salon I...8
    OR
COS   112AB   Salon I-AB...4
COS   112BB   Salon I-BB...4

COS   113   Cosmetology Concepts II 4
    OR
COS   113AB   Cosmetology Concepts II-AB 2
COS   113BB   Cosmetology Concepts II-BB.............................2

COS   114   Salon II 8
    OR
COS   114AB   Salon II-AB...4
COS   114BB   Salon II-BB...4

COS   115   Cosmetology Concepts III....................................4
    OR
COS   115AB   Cosmetology Concepts III-AB 2
COS   115BB   Cosmetology Concepts III-BB...........................2

COS   116   Salon III 4
    OR
COS   116AB   Salon III-AB..2
COS   116BB   Salon III-BB..2

COS   117   Cosmetology Concepts IV....................................2
    OR
COS   117AB   Cosmetology Concepts IV-AB 1
COS   117BB   Cosmetology Concepts IV-BB...........................1

COS   118   Salon IV...7
    OR
COS   118AB   Salon IV-AB..4
COS   118BB   Salon IV-BB...3

Total Credit Hours Required 47

DEVELOPMENTAL COURSE REQUIREMENTS*
RED   090   Improved College Reading..4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Cosmetology - Diploma • D55140
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
COS 111	Cosmetology Concepts I	4	0	0	4
COS 112	Salon I	0	24	0	8
	Total	5	24	0	12
Spring - 1st year					
COS 113	Cosmetology Concepts II	4	0	0	4
COS 114	Salon II	0	24	0	8
ENG 102	Applied Communication II	3	0	0	3
	Total	7	24	0	15
Summer - 1st year					
COS 115	Cosmetology Concepts III	4	0	0	4
COS 116	Salon III	0	12	0	4
	Total	4	12	0	8
Fall - 2nd year					
COS 117	Cosmetology Concepts IV	2	0	0	2
COS 118	Salon IV	0	21	0	7
PSY 150	General Psychology	3	0	0	3
	Total	5	21	0	12
	Grand Total	21	81	0	47

Cosmetology - Diploma/Part-Time • D55140
Suggested Program Sequence Evening

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
COS 111AB	Cosmetology Concepts I-AB	2	0	0	2
COS 112AB	Salon I-AB	0	12	0	4
	Total	2	12	0	6
Spring - 1st year					
COS 111BB	Cosmetology Concepts I-BB	2	0	0	2
COS 112BB	Salon I-BB	0	12	0	4
ENG 102	Applied Communications II	3	0	0	3
	Total	5	12	0	9
Summer - 1st year					
PSY 150	General Psychology	3	0	0	3
	Total	3	0	0	3
Fall - 2nd year					
COS 113AB	Cosmetology Concepts II-AB	2	0	0	2
COS 114AB	Salon II-AB	0	12	0	4
	Total	2	12	0	6
Spring - 2nd year					
COS 113BB	Cosmetology Concepts II-BB	2	0	0	2
COS 114BB	Salon II-BB	0	12	0	4
	Total	3	12	0	6
Fall - 3rd year					
COS 115AB	Cosmetology Concepts III-BB	2	0	0	2
COS 116AB	Salon III-AB	0	6	0	2
	Total	2	6	0	4
Spring - 3rd year					
COS 115BB	Cosmetology Concepts III-BB	2	0	0	2
COS 116BB	Salon III-BB	0	6	0	2
	Total	2	6	0	4
Fall - 4th year					
COS 117AB	Cosmetology Concepts IV-AB	1	0	0	1
COS 118AB	Salon IV-AB	0	12	0	4
	Total	1	12	0	5
Spring - 4th year					
COS 117BB	Cosmetology Concepts IV-BB	1	0	0	1
COS 118BB	Salon IV-BB	0	9	0	3
	Total	1	9	0	4
	Grand Total	21	81	0	47

CRIMINAL JUSTICE TECHNOLOGY
A.A.S. Program (A55180)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day--five semesters full-time attendance; Evening--ten semesters part-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Criminal Justice Technology curriculum is designed to provide knowledge of criminal justice systems and operations. Study will focus on local, state, and federal law enforcement, judicial processes, corrections, and security services. The criminal justice system's role within society will be explored. Emphasis is on criminal justice systems, criminology, juvenile justice, criminal and constitutional law, investigative principles, ethics, and community relations. Additional study may include issues and concepts of government, counseling, communications, computers, and technology. Employment opportunities exist in a variety of local, state, and federal law enforcement, corrections, and security fields. Examples include police officer, deputy sheriff, county detention officer, state trooper, intensive probation/parole surveillance officer, correctional officer, and loss prevention specialist.

GENERAL EDUCATION COURSES: SHC
English/Communications:
ENG   111   Expository Writing 3

ENG   113   Literature-Based Research................................3
     OR
ENG   114   Prof Research & Reporting...............................3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
     OR
MAT   140 Survey of Mathematics 3
MAT   140A Survey of Mathematics Lab 1
Social/Behavioral Sciences:
PSY   150   General Psychology..3

MAJOR COURSES:
CCT   110   Intro to Cyber Crime.......................................3
     OR
CIS   110   Introduction to Computers................................3
CJC   111   Intro to Criminal Justice 3
CJC   112   Criminology...3
CJC   113   Juvenile Justice 3
CJC   121   Law Enforcement Operations 3
CJC   131   Criminal Law 3
CJC   132   Court Procedure & Evidence 3
CJC   141   Corrections..3
CJC   151   Intro to Loss Prevention 3
CJC   160   Terrorism: Underlying Issues 3
CJC   212   Ethics & Comm Relations 3
CJC   215   Organization & Administration 3
CJC   221   Investigative Principles.....................................4
CJC   225   Crisis Intervention 3
CJC   231   Constitutional Law 3
SOC   210   Introduction to Sociology 3

Program Elective or Co-op 3

   CCT 112   Ethics & High Technology 3
   CCT 121   Computer Crime Invest 4
   CIS 110   Introduction to Computers..3
   CJC 114   Investigative Photography...2
   CJC 222   Criminalistics..3
   COE XXX Co-op Work Experience 3
   HIS 111   World Civilizations I..3
   HIS 112   World Civilizations II..3
   HIS 121   Western Civilization I..3
   HIS 122   Western Civilization II..3
   POL 120   American Government 3
   POL 130   State & Local Government...3
   PSY 231   Forensic Psychology..3
   PSY 241   Developmental Psych 3
   PSY 281   Abnormal Psychology 3
   SOC 220   Social Problems..3

Con't.

Criminal Justice Technology, Con't.

Co-op Option: Qualified students may elect to take 3 credit hours of cooperative education in place of 3 hours Program electives.

Credits applied for prior completion of B.L.E.T.

Total Credit Hours Required 67-68

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals..3
ENG   090   Composition Strategies...3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Criminal Justice Technology • A55180
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
CJC 111 Introduction to Criminal Justice	3	0	0	3
CJC 131 Criminal Law	3	0	0	3
CJC 132 Court Procedures & Evidence	3	0	0	3
CJC 160 Terrorism: Underlying Issues	3	0	0	3
ENG 111 Expository Writing	3	0	0	3
Total	15	0	0	15
Spring - 1st year				
CJC 112 Criminology	3	0	0	3
CJC 121 Law Enforcement Operations	3	0	0	3
CJC 221 Investigative Principles	3	2	0	4
CCT 110 Intro to Cyber Crime	3	0	0	3
OR CIS 110 Introduction to Computers	2	2	0	3
Total	11/12	4	0	13
Summer - 1st year				
ENG 113 Literature-Based Research	3	0	0	3
OR ENG 114 Prof. Research & Reporting	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
OR MAT 140 Survey of Mathematics	3	0	0	3
and MAT 140A Survey of Mathematics Lab	0	2	0	1
PSY 150 General Psychology	3	0	0	3
Total	8/9	2	0	9/10
Fall - 2nd year				
CJC 113 Juvenile Justice	3	0	0	3
CJC 215 Organization & Administration	3	0	0	3
CJC 231 Constitutional Law	3	0	0	3
SOC 210 Introduction to Sociology	3	0	0	3
Humanities Elective	3	0	0	3
Total	15	0	0	15
Spring - 2nd year				
CJC 141 Corrections	3	0	0	3
CJC 151 Introduction to Loss Prevention	3	0	0	3
CJC 212 Ethics & Comm. Relations	3	0	0	3
CJC 225 Crisis Intervention	3	0	0	3
Program Elective OR Co-Op				3
Total	15	0	0	15
Grand Total	64/66	6	0	67/68

Criminal Justice Technology • A55180
Suggested Prog Sequence Evening

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
CJC 111 Introduction to Criminal Justice	3	0	0	3
CJC 131 Criminal Law	3	0	0	3
ENG 111 Expository Writing	3	0	0	3
Total	9	0	0	9
Spring - 1st year				
CJC 121 Law Enforcement Operations	3	0	0	3
CCT 110 Intro to Cyber Crime	3	0	0	3
OR CIS 110 Introduction to Computers	2	2	0	3
Total	5/6	2	0	6
Summer - 1st year				
MAT 115 Mathematical Models	2	2	0	3
OR MAT 140 Survey of Mathematics	3	0	0	3
and MAT 140A Survey of Mathematics Lab	0	2	0	1
PSY 150 General Psychology	3	0	0	3
Total	5/6	2	0	6/7
Fall - 2nd year				
CJC 113 Juvenile Justice	3	0	0	3
SOC 210 Introduction to Sociology	3	0	0	3
Total	6	0	0	6
Spring - 2nd year				
CJC 141 Corrections	3	0	0	3
CJC 212 Ethics & Comm. Relations	3	0	0	3
Humanities Elective	3	0	0	3
Total	9	0	0	9
Summer - 2nd year				
ENG 113 Literature-Based Research	3	0	0	3
OR ENG 114 Prof. Research & Reporting	3	0	0	3
Total	3	0	0	3
Fall - 3rd year				
CJC 132 Court Procedures & Evidence	3	0	0	3
CJC 160 Terrorism: Underlying Issues	3	0	0	3
Program Elective OR Co-Op Elective	3	0	0	3
Total	9	0	0	9
Spring - 3rd year				
CJC 112 Criminology	3	0	0	3
CJC 221 Investigative Principles	3	2	0	4
Total	6	2	0	7
Fall - 4th year				
CJC 215 Organization & Administration	3	0	0	3
CJC 231 Constitutional Law	3	0	0	3
Total	6	0	0	6
Spring - 4th year				
CJC 151 Introduction to Loss Prevention	3	0	0	3
CJC 225 Crisis Intervention	3	0	0	3
Total	6	0	0	6
Grand Total	64/66	6	0	67/68

CRIMINAL JUSTICE TECHNOLOGY
Law Enforcement Certificate Prog (C5518001)

MAJOR COURSES: .... **SHC**
CJC 111 Intro to Criminal Justice 3
CJC 121 Law Enforcement Operations 3
CJC 132 Court Procedure & Evidence 3
CJC 212 Ethics & Comm Relations 3
CJC 225 Crisis Intervention 3
Total Credit Hours Required **15**

Criminal Justice Technology
Law Enforcement Cert. (C5518001) Suggested Sequence

Fall - 1st year				
CJC 111 Intro to Criminal Justice	3	0	0	3
CJC 132 Court Procedure & Evidence	3	0	0	3
Total	6	0	0	6
Spring - 1st year				
CJC 121 Law Enforcement Operations	3	0	0	3
CJC 212 Ethics & Comm. Relations	3	0	0	3
CJC 225 Crisis Intervention	3	0	0	3
Total	9	0	0	9
Grand Total	15	0	0	15

CRIMINAL JUSTICE TECHNOLOGY
Correctional -- Probation & Parole Certificate Prog (C5518002)

MAJOR COURSES: .... **SHC**
CJC 111 Intro to Criminal Justice 3
CJC 141 Corrections 3
CJC 212 Ethics & Comm Relations 3
CJC 215 Organization & Administration 3
CJC 225 Crisis Intervention 3
Total Credit Hours Required **15**

Correctional -- Probation & Parole
Cert. Suggested Sequence (C5518002)

Fall - 1st year				
CJC 111 Intro to Criminal Justice	3	0	0	3
CJC 215 Organization & Administration	3	0	0	3
Total	6	0	0	6
Spring - 2nd year				
CJC 141 Corrections	3	0	0	3
CJC 212 Ethics & Comm. Relations	3	0	0	3
CJC 225 Crisis Intervention	3	0	0	3
Total	9	0	0	9
Grand Total	15	0	0	15

CRIMINAL JUSTICE TECHNOLOGY
Judicial -- Court Administrator Certificate Prog (C5518004)

MAJOR COURSES: .... **SHC**
CJC 111 Intro to Criminal Justice 3
CJC 131 Criminal Law 3
CJC 132 Court Procedure & Evidence 3
CJC 215 Organization & Administration 3
CJC 225 Crisis Intervention 3
Total Credit Hours Required **15**

Judicial -- Court Administrator - Cert. Suggested Sequence (C5518004)

Fall - 1st year				
CJC 111 Intro to Criminal Justice	3	0	0	3
CJC 131 Criminal Law	3	0	0	3
CJC 132 Court Procedure & Evidence	3	0	0	3
CJC 215 Organization & Administration	3	0	0	3
Total	12	0	0	12
Spring - 1st year				
CJC 225 Crisis Intervention	3	0	0	3
Total	3	0	0	3
Grand Total	15	0	0	15

CRIMINAL JUSTICE TECHNOLOGY
Retail -- Industrial Security Certificate Prog (C5518003)

MAJOR COURSES: .... **SHC**
CJC 111 Intro to Criminal Justice 3
CJC 131 Criminal Law 3
CJC 151 Intro to Loss Prevention 3
CJC 215 Organization & Administration 3
CJC 221 Investigative Principles 4
Total Credit Hours Required **16**

Retail -- Industrial Security - Cert. Suggested Sequence (C551803)

Fall - 1st year				
CJC 111 Intro to Criminal Justice	3	0	0	3
CJC 131 Criminal Law	3	0	0	3
CJC 215 Organization & Administration	3	0	0	3
Total	9	0	0	9
Spring - 1st year				
CJC 221 Investigative Principles	3	2	0	4
CJC 151 Intro to Loss Prevention	3	0	0	3
Total	6	2	0	7
Grand Total	15	2	0	16

CRIMINAL JUSTICE TECHNOLOGY
Latent Evidence Concentration
A.A.S. Program (A5518A)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day--five semesters full-time attendance; Evening--ten semesters part-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.

Latent Evidence is a concentration under the curriculum of Criminal Justice Technology. This curriculum is designed to provide knowledge of latent evidence systems and operations. Study will focus on local, state, and federal law enforcement, evidence processing and procedures. Students will learn both theory and hands-on analysis of latent evidence. They will learn fingerprint classification, identification, and chemical development. Students will record, cast, and recognize footwear and tire-tracks; and process crime scenes. Issues and concepts of communications and the use of computers and computer assisted design programs in crime scene technology will be discussed. Graduates should qualify for employment in a variety of criminal justice organizations especially in local, state, and federal law enforcement, and correctional agencies.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
ENG   113   Literature-Based Research.........................3
   OR
ENG   114   Prof Research & Reporting........................3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
   OR
MAT   140   Survey of Mathematics 3
MAT   140A   Survey of Mathematics Lab........................1
Social/Behavioral Sciences:
PSY   150   General Psychology.................................3

MAJOR COURSES:
CCT   110   Intro to Cyber Crime..............................3
   OR
CIS   110   Introduction to Computers.......................3
CJC   111   Intro to Criminal Justice 3
CJC   112   Criminology..3
CJC   113   Juvenile Justice 3
CJC   121   Law Enforcement Operations....................3
CJC   131   Criminal Law 3
CJC   132   Court Procedure & Evidence 3
CJC   144   Crime Scene Processing 3
CJC   146   Trace Evidence 3
CJC   212   Ethics & Comm Relations 3
CJC   221   Investigative Principles...........................4
CJC   222   Criminalistics.......................................3
CJC   231   Constitutional Law 3
CJC   245   Friction Ridge Analysis 3
CJC   246   Adv Friction Ridge Analys 3
CJC   250   Forensic Biology I 3
   OR
CJC   251   Forensic Chemistry I 4
PSY   231   Forensic Psychology...............................3

Criminal Justice Elective 1-4
         Students must choose one (1) of the following:
         CJC   114   Investigative Photography...........................2
         COE   XXX   Co-Op Work Experience 1-4

Total Credit Hours Required 68-71

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals.............................3
ENG   090   Composition Strategies................................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading...........................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Criminal Justice Technology
Latent Evidence Concentration • A5518A
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
CJC 111 Introduction to Criminal Justice	3	0	0	3
CJC 131 Criminal Law	3	0	0	3
CJC 132 Court Procedures & Evidence	3	0	0	3
ENG 111 Expository Writing	3	0	0	3
Total	12	0	0	12
Spring - 1st year				
CJC 112 Criminology	3	0	0	3
CJC 121 Law Enforcement Operations	3	0	0	3
CJC 221 Investigative Principles	3	2	0	4
CCT 110 Intro to Cyber Crime	3	0	0	3
OR CIS 110 Introduction to Computers	2	2	0	3
Total	11/12	4	0	13
Summer - 1st year				
ENG 113 Literature-Based Research	3	0	0	3
OR ENG 114 Prof. Research & Reporting	3	0	0	3
MAT 115 Mathematical Models	3	0	0	3
OR MAT 140 Survey of Mathematics	3	0	0	3
and MAT 140A Survey of Mathematics Lab	0	2	0	1
PSY 150 General Psychology	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	12	2	0	12/13
Fall - 2nd year				
CJC 113 Juvenile Justice	3	0	0	3
CJC 146 Trace Evidence	2	3	0	3
CJC 231 Constitutional Law	3	0	0	3
CJC 245 Friction Ridge Analysis	2	3	0	3
Criminal Justice Elective				1/4
Total	10	6	0	13/16
Spring - 2nd year				
CJC 222 Criminalistics	3	0	0	3
CJC 144 Crime Scene Processing	2	3	0	3
CJC 212 Ethics & Comm. Relations	3	0	0	3
CJC 246 Advance Friction Ridge Analysis	2	3	0	3
CJC 250 Forensic Biology	2	2	0	3
OR CJC 251 Forensic Chemistry	3	2	0	4
PSY 231 Forensic Psychology	3	0	0	3
Total	15/16	10	0	18/19
Grand Total	60/62	22	0	68/71

Criminal Justice Technology
Latent Evidence Concentration • A5518A
Suggested Program Sequence Evening

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
CJC 111 Introduction to Criminal Justice	3	0	0	3
CJC 131 Criminal Law	3	0	0	3
ENG 111 Expository Writing	3	0	0	3
Total	9	0	0	9
Spring - 1st year				
CJC 121 Law Enforcement Operations	3	0	0	3
CCT 110 Intro to Cyber Crime	3	0	0	3
OR CIS 110 Introduction to Computers	2	2	0	3
Total	5/6	2	0	6
Summer - 1st year				
MAT 115 Mathematical Models	3	0	0	3
OR Mat 140 Survey of Mathematics	3	0	0	3
and MAT 140A Survey of Mathematics Lab	0	2	0	1
PSY 150 General Psychology	3	0	0	3
Total	6	2	0	6/7
Fall - 2nd year				
CJC 113 Juvenile Justice	3	0	0	3
CJC 146 Trace Evidence	2	3	0	3
Criminal Justice Elective				1/4
Total	5	3	0	7/10
Spring - 2nd year				
CJC 144 Investigative Principle	2	3	0	3
CJC 212 Ethics & Comm. Relations	3	0	0	3
PSY 231 Forensic Psychology	3	0	0	3
Total	8	3	0	9
Summer - 2nd year				
ENG 113 Literature - Based Research	3	0	0	3
OR ENG 114 Prof. Research & Reporting	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	6	0	0	6
Fall - 3rd year				
CJC 132 Court Procedures & Evidence	3	0	0	3
Total	3	0	0	3
Spring - 3rd year				
CJC 221 Investigative Principles	3	2	0	4
CJC 112 Criminology	3	0	0	3
Total	6	2	0	7
Fall - 4th year				
CJC 231 Constitutional Law	3	0	0	3
CJC 245 Friction Ridge Analysis	2	3	0	3
Total	5	3	0	6
Spring - 4th year				
CJC 222 Criminalistics	3	0	0	3
CJC 246 Advance Friction Ridge Analysis	2	3	0	3
CJC 250 Forensic Biology	2	2	0	3
OR CJC 251 Forensic Chemistry	3	2	0	4
Total	7/8	5	0	9/10
Grand Total	60/62	17	0	68/73

CRIMINAL JUSTICE TECHNOLOGY
Latent Evidence Concentration Crime Scene Investigation
Certificate Program (C5518A01)

MAJOR COURSES:			SHC
CJC	111	Intro to Criminal Justice	3
CJC	114	Investigative Photography	2
CJC	144	Crime Scene Processing	3
CJC	146	Trace Evidence	3
CJC	221	Investigative Principles	4
Total Credit Hours Required			**15**

CRIMINAL JUSTICE TECHNOLOGY
Latent Evidence Concentration Crime Scene Investigation
Cert. Prog. Suggested Sequence (C5518A01)

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
CJC 111 Introduction to Criminal Justice	3	0	0	3
CJC 146 Trace Evidence	2	3	0	3
CJC 114 Investigative Photography	1	2	0	2
Total	6	5	0	8
Spring - 1st year				
CJC 221 Investigative Principles	3	2	0	4
CJC 144 Crime Scene Processing	2	3	0	3
Total	5	5	0	7
Grand Total	11	10	0	15

CYBER CRIME TECHNOLOGY
A.A.S. Program (A55210)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day--five semesters full-time attendance; Evening--ten semesters part-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. This curriculum will prepare students to enter the field of computer crime investigations and private security.   Students completing this curriculum will be capable of investigating computer crimes, properly seize and recover computer evidence and aid in the prosecution of cyber criminals. Course work in this curriculum will include a division of work in the disciplines of criminal justice and computer information systems. Additionally, students will be required to take specific cyber crime classes. Graduates should qualify to become computer crime investigators for local or state criminal justice agencies. Also, these graduates should be competent to serve as computer security specialists or consultants with private business.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG	111	Expository Writing	3
ENG	113	Literature-Based Research	3
	OR		
ENG	114	Prof Research & Reporting	3

Humanities/Fine Arts:
Elective			3

Natural Sciences/Mathematics:
MAT	115	Mathematical Models	3
	OR		
MAT	140	Survey of Mathematics	3
MAT	140A	Survey of Mathematics Lab	1

Social/Behavioral Sciences:
PSY	150	General Psychology	3

MAJOR COURSES:
CCT	110	Intro to Cyber Crime	3
CCT	112	Ethics & High Technology	3
CCT	121	Computer Crime Invest	4
CCT	231	Technology Crimes & Law	3
CCT	240	Data Recovery Techniques	3
CCT	250	Network Vulnerabilities I	3
CCT	285	Trends in Cyber Crime	3
CCT	289	Capstone Project	3
CIS	110	Introduction to Computers	3
CJC	111	Intro to Criminal Justice	3
CJC	112	Criminology	3
CJC	131	Criminal Law	3
CTS	120	Hardware/Software Support	3
NET	125	Networking Basics	3
NOS	110	Operating System Concepts	3
SEC	110	Security Concepts	3

Total Credit Hours Required 64-65

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

CYBER CRIME TECHNOLOGY
Cyber Crime & Computer Security Cert. Prog. (C5521001)

MAJOR COURSES: **SHC**
CCT	110	Intro to Cyber Crime	3
CCT	112	Ethics & High Technology	3
CCT	121	Computer Crime Invest	4
CCT	231	Technology Crimes & Law	3
CCT	240	Data Recovery Techniques	3

Total Credit Hours Required 16

Cyber Crime Technology
Cyber Crime & Computer Security (C5521001) Suggested Sequence

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
CCT	110	Intro to Cyber Crime	3	0	0	3
CCT	112	Ethics & High Technology	3	0	0	3
CCT	231	Technology Crimes & Law	3	0	0	3
CCT	240	Data Recovery Techniques	3	0	0	3
		Total	12	0	0	12
Spring - 1st year						
CCT	121	Computer Crime Investigations	3	2	0	4
		Total	3	2	0	4
		Grand Total	15	2	0	16

Cyber Crime Technology • A55210
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
CJC	111	Introduction to Criminal Justice	3	0	0	3
CJC	131	Criminal Law	3	0	0	3
CCT	110	Introduction to Cyber Crime	3	0	0	3
CCT	112	Ethics & High Technology	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
		Total	14	2	0	15
Spring - 1st year						
CJC	112	Criminology	3	0	0	3
CCT	121	Computer Crime Investigations	3	2	0	4
NOS	110	Operating System Concepts	2	3	0	3
CTS	120	Hardware/Software Support	2	3	0	3
NET	125	Networking Basics	1	4	0	3
		Total	11	12	0	16
Summer - 1st year						
ENG	111	Expository Writing	3	0	0	3
MAT	115	Mathematical Models	2	2	0	3
	OR MAT 140	Survey of Mathematics	3	0	0	3
	and MAT 140A	Survey of Mathematics Lab	0	2	0	1
PSY	150	General Psychology	3	0	0	3
		Total	8/9	2	0	9/10
Fall - 2nd year						
CCT	240	Data Recovery Techniques	2	3	0	3
CCT	250	Networking Vulnerabilities I	2	2	0	3
CCT	231	Technology Crimes & Law	3	0	0	3
SEC	110	Security Concepts	2	2	0	3
		Total	12	7	0	12
Spring - 2nd year						
CCT	285	Trends in Cyber Crime	2	2	0	3
CCT	289	Capstone Project	1	6	0	3
ENG	113	Literature - Based Research	3	0	0	3
	OR ENG 114	Prof. Research & Reporting	3	0	0	3
		Humanities/Fine Arts Elective	3	0	0	3
		Total	9	8	0	12
		Grand Total	51/52	31	0	64/65

Cyber Crime Technology • A55210 Suggested Prog Seq Evening

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
CJC	111	Introduction to Criminal Justice	3	0	0	3
CCT	110	Introduction to Cyber Crime	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
		Total	8	2	0	9
Spring - 1st year						
CCT	121	Computer Crime Investigations	3	2	0	4
NOS	110	Operating Systems Concepts	2	3	0	3
NET	125	Networking Basics	2	2	0	3
		Total	7	7	0	10
Summer - 1st year						
ENG	111	Expository Writing	3	0	0	3
PSY	150	General Psychology	3	0	0	3
		Total	6	0	0	6
Fall - 2nd year						
CCT	240	Data Recovery Techniques	2	3	0	3
CCT	250	Networking Vulnerabilities I	1	4	0	3
		Total	3	7	0	6
Spring - 2nd year						
ENG	113	Literature - Based Research	3	0	0	3
	OR ENG 114	Prof. Research & Reporting	3	0	0	3
		Humanities/Fine Arts Elective	3	0	0	3
		Total	6	0	0	6
Summer - 2nd year						
MAT	115	Mathematicals Models	2	2	0	3
	OR MAT 140	Survey of Mathematics	3	0	0	3
	and MAT 140A	Survey of Mathematics Lab	0	2	0	1
		Total	2/3	2	0	3/4
Fall - 3rd year						
CJC	131	Criminal Law	3	0	0	3
CCT	112	Ethics & High Technology	3	0	0	3
		Total	6	0	0	6
Spring - 3rd year						
CJC	112	Criminology	3	0	0	3
CTS	120	Hardware/Software Support	2	3	0	3
		Total	5	3	0	6
Fall - 4th year						
CCT	231	Technology Crimes & Law	3	0	0	3
SEC	110	Security Concepts	2	2	0	3
		Total	5	2	0	6
Spring - 4th year						
CCT	285	Trends in Cyber Crime	2	2	0	3
CCT	289	Capstone Project	1	6	0	3
		Total	3	8	0	6
		Grand Total	51/52	31	0	64/65

DENTAL HYGIENE
A.A.S. Program (A45260)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Some general education courses are offered at night. Minimum time for completion: seven semesters. The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Dental Hygiene curriculum provides individuals with the knowledge and skills to assess, plan, implement, and evaluate dental hygiene care for individuals and the community. Students will learn to prepare the operatory, collect patient histories, note abnormalities, plan care, teach oral hygiene, debride and polish teeth, expose radiographs, apply preventive agents, complete necessary chart entries, and perform other procedures related to dental hygiene care. Graduates of this program may be eligible to take national and state/regional examinations for licensure which are required to practice dental hygiene. Employment op-portunities include dental offices, clinics, schools, public health agencies, industry, and educational institutions.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
COM	110	Introduction to Communication	3
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
	OR		
ENG	112	Argument-Based Research	3
	OR		
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:
Elective			3

Natural Sciences/Mathematics:
CHM	130	Gen, Org, & Biochemistry	3
CHM	130A	Gen, Org, & Biochemistry Lab	1

Social/Behavioral Sciences:
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

MAJOR COURSES:
BIO	163	Basic Anat & Physiology	5
BIO	175	General Microbiology	3
DEN	110	Orofacial Anatomy	3
DEN	111	Infection/Hazard Control	2
DEN	112	Dental Radiography	3
DEN	120	Dental Hyg Preclinic Lec	2
DEN	121	Dental Hygiene Precl Lab	2
DEN	123	Nutrition/Dental Health	2
DEN	124	Periodontology	2
DEN	130	Dental Hygiene Theory I	2
DEN	131	Dental Hygiene Clinic I	3
DEN	140	Dental Hygiene Theory II	1
DEN	141	Dental Hygiene Clinic II	2
DEN	220	Dental Hygiene Theory III	2
DEN	221	Dental Hygiene Clinic III	4
DEN	222	General & Oral Pathology	2
DEN	223	Dental Pharmacology	2
DEN	224	Materials and Procedures	2
DEN	230	Dental Hygiene Theory IV	1
DEN	231	Dental Hygiene Clinic IV	4
DEN	232	Community Dental Health	3
DEN	233	Professional Development	2

Total Credit Hours Required 76

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Background Check - A criminal background check is required for students to participate in external rotations and for North Carolina Dental Hygiene Licensure.

Dental Hygiene • A45260
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Spring - 1st year					
BIO 163	Basic Anatomy and Physiology	4	2	0	5
CHM 130	General, Organic & Biochemistry	3	0	0	3
CHM 130A	General, Organic & Biochemistry Lab	0	2	0	1
ENG 111	Expository Writing	3	0	0	3
PSY 150	General Psychology	3	0	0	3
	Total	13	4	0	15
Fall - 1st year					
BIO 175	General Microbiology	2	2	0	3
COM 110	Intro to Communication	3	0	0	3
ENG 114	Prof Research & Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
SOC 210	Introduction to Sociology	3	0	0	3
	Total	11	2	0	12

Note: General Education Course Requirements- Applicants must have compeleted ALL General Education courses required for the program prior to the Dental Hygiene Program application deadline **(March 15)**. Students must complete BIO 163, BIO 175, CHM 130 & CHM 130A, COM 110, ENG 111, ENG 114, PSY 150, & SOC 210. Grades lower than "C" will not be accepted. Students must also be accepted into the Dental Hygiene program prior to taking DEN courses.

		Class	Lab	Clin/WkExp	Credit
Fall - 2nd year					
DEN 110	Orofacial Anatomy	2	2	0	3
DEN 111	Infection/Hazard Control	2	0	0	2
DEN 120	DH Preclinic Lecture	2	0	0	2
DEN 121	DH Preclinic Lab	0	6	0	2
	Humanities/Fine Arts Elective	3	0	0	3
	Total	9	8	0	12
Spring - 2nd year					
DEN 112	Dental Radiography	2	3	0	3
DEN 222	General & Oral Pathology	2	0	0	2
DEN 130	DH Theory I	2	0	0	2
DEN 131	DH Clinic I	0	0	9	3
DEN 123	Nutrition/Dental Health	2	0	0	2
	Total	8	3	9	12
Summer - 2nd year					
DEN 124	Periodontology	2	0	0	2
DEN 140	DH Theory II	1	0	0	1
DEN 141	DH Clinic II	0	0	6	2
	Total	3	0	6	5
Fall - 3rd year					
DEN 220	DH Theory III	2	0	0	2
DEN 221	DH Clinic III	0	0	12	4
DEN 223	Dental Pharmacology	2	0	0	2
DEN 232	Community Dental Health	2	0	3	3
	Total	6	0	15	11
Spring - 3rd year					
DEN 224	Materials and Procedures	1	3	0	2
DEN 230	DH Theory IV	1	0	0	1
DEN 231	DH Clinic IV	0	0	12	4
DEN 233	Professional Development	2	0	0	2
	Total	4	3	12	9
	Grand Total	54	20	42	76

.

EARLY CHILDHOOD EDUCATION
A.A.S. Program (A55220)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day -- six semesters full-time attendance; Evening -- ten semesters part-time attendance. An Associate in Applied Science Degree is awarded graduates of the Early Childhood Education Degree curriculum. A Diploma is awarded students completing the diploma curriculum. A Certificate is awarded students completing the certificate curriculum. <u>Special Admissions Requirements for Early Childhood Education Programs.</u> **In addition to the general procedures to apply for admission to a curriculum program of study, applicants for the Early Childhood Education program must complete other procedures. CVCC's Early Childhood Education program requires completion of educational experiences in childcare facilities and/or public school settings. These settings require students to undergo criminal background checks. If a student is excluded from an educational setting as a result of a background check, the student may be asked to withdraw from the program. Some settings may also require additional vaccinations and/or health examinations. Admission into CVCC's Early Childhood Education program may be contingent upon receipt of a CVCC medical form documenting that the applicant possesses satisfactory physical and mental health. Facilities for providing health care services are not available on campus.**

The Early Childhood Education 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.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
COM 110 Introduction to Communication..3
ENG 111 Expository Writing 3
ENG 113 Literature-Based Research...3
         OR ENG 114 Pro Research & Reporting 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
Elective 3/4
Social/Behavioral Science:
Elective 3

MAJOR COURSES:
EDU 119 Intro to Early Child Educ..4
EDU 131 Child, Family, & Commun 3

EDU 144 Child Development I 3
EDU 145 Child Development II 3
      OR
     PSY 244 Child Development I...3
     PSY 245 Child Development II..3

EDU 146 Child Guidance 3
EDU 151 Creative Activities 3
EDU 153 Health, Safety, & Nutrit 3
EDU 221 Children with Exceptional 3
EDU 251 Exploration Activities 3
EDU 259 Curriculum Planning..3
EDU 271 Educational Technology 3
EDU 280 Language & Literacy Exp..3
EDU 284 Early Child Capstone Prac 4
PSY 150 General Psychology..3
SOC 210 Introduction to Sociology 3
CIS/EDU Elective...2/3
     Students are required to take one (1) course from the following:
     CIS 110 Introduction to Computers...3
     EDU 234 Infants, Toddlers, & Twos...3
     EDU 235 School Age Dev. & Prog...3
     EDU 261 Early Childhood Admin I 3
     EDU 262 Early Childhood Admin II 3
     EDU 275 Effective Teacher Training 2

OTHER REQUIRED COURSES:
ACA 111 College Student Success..1

Total Credit Hours Required 68/70

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals..3
ENG 090 Composition Strategies..3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED 090 Improved College Reading..4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Early Childhood Education • A55220
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
ACA 111 College Student Success	1	0	0	1
EDU 119 Intro to Early Childhood Education	4	0	0	4
*EDU 144 Child Development I	3	0	0	3
EDU 151 Creative Activities	3	0	0	3
EDU 271 Educational Technology	2	2	0	3
ENG 111 Expository Writing	3	0	0	3
Total	16	2	0	17
Spring - 1st year				
*EDU 145 Child Development II	3	0	0	3
EDU 146 Child Guidance	3	0	0	3
SOC 210 Intro. To Sociology	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Natural Science/Mathematics Elective	3	1	0	3/4
Total	15	1	0	15/16
Summer - 1st year				
EDU 153 Health, Safety & Nutrition	3	0	0	3
Social/Behavioral Science Elective	3	0	0	3
Total	6	0	0	6
Fall - 2nd year				
ENG 113 Literature Based Research	3	0	0	3
OR ENG 114 Prof. Research & Reporting	3	0	0	3
EDU 131 Child Family & Community	3	0	0	3
EDU 221 Children With Exceptional	3	0	0	3
EDU 259 Curriculum Planning	3	0	0	3
PSY 150 General Psychology	3	0	0	3
Total	15	0	0	15
Spring - 2nd year				
COM 110 Intro to Communication	3	0	0	3
EDU 251 Exploration Activities	3	0	0	3
EDU 280 Language & Lit. Exp.	3	0	0	3
EDU 284 EC Capstone Practicum	1	9	0	4
CIS/EDU Elective				2/3
Total	13	10	0	15/16
Grand Total	65	12	0	68/70

CIS/EDU Electives: CIS 110, EDU 261, EDU 262, EDU 234, EDU 235, EDU 275.
Natural Science and Math Electives: AST 151, AST 151A, BIO 110, BIO 111, BIO 143, BIO 163, BIO 168, CHM 130, CHM 130A Lab, CHM 131, CHM 131A Lab, GEL 111, GEL 120, MAT 115, MAT 121, MAT 140, MAT 140A Lab, MAT 151, MAT 151A Lab, MAT 161, MAT 161A Lab, MAT 171, MAT 171A Lab, MAT 175, MAT 175A Lab, PHS 130, PHY 110 and PHY 110A Lab, PHY 121.

* Students may take PSY 244 and PSY 245 for EDU 144 and EDU 145

EARLY CHILDHOOD EDUCATION
Diploma Program   (D55220)

GENERAL EDUCATION COURSES: ....SHC

English/Communications:

ENG 111   Expository Writing 3

ENG 113   Literature-Based Research 3
   OR   ENG 114 Prof Research & Reporting 3

MAJOR COURSES:

EDU 119   Intro to Early Child Educ 4

EDU 131   Child, Family, & Commun 3

EDU 144   Child Development I 3

EDU 145   Child Development II 3
   OR
      PSY 244   Child Development I 3
      PSY 245   Child Development II 3

EDU 146   Child Guidance 3

EDU 151   Creative Activities 3

EDU 153   Health, Safety, & Nutrit. 3

EDU 221   Children with Exceptional 3

EDU 259   Curriculum Planning 3

EDU 271   Educational Technology 3

EDU 280   Language & Literacy Exp 3

EDU 284   Early Capstone Practicum 4

OTHER REQUIRED COURSES:

ACA 111   College Student Success 1

Total Credit Hours Required 45

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG 090   Composition Strategies...3

RED 090   Improved College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to theCourseDescriptions section for prerequisite course information.

Early Childhood Education Diploma Suggested Sequence (D55220)

Fall - 1st year

ACA 111	College Student Success	1	0	0	1
EDU 119	Intro to Early Childhood Education	4	0	0	4
*EDU 144	Child Development I	3	0	0	3
EDU 151	Creative Activities	3	0	0	3
EDU 271	Educational Technology	2	2	0	3
	Total	13	2	0	14

Spring - 1st year

*EDU 145	Child Development II	3	0	0	3
EDU 146	Child Guidance	3	0	0	3
ENG 111	Expository Writing	3	0	0	3
EDU 280	Language & Literacy Exp	3	0	0	3
	Total	12	0	0	12

Summer - 1st year

EDU 153	Health, Safety & Nutrition	3	0	0	3
ENG 113	Literature Based Research	3	0	0	3
	OR ENG 114 Prof. Research & Reporting	3	0	0	3
	Total	6	0	0	6

Fall - 2nd year

EDU 131	Child Family & Community	3	0	0	3
EDU 221	Children With Exceptional	3	0	0	3
EDU 259	Curriculum Planning	3	0	0	3
EDU 284	Early Childhood Capstone Prac	1	9	0	4
	Total	10	9	0	13
	Grand Total	41	11	0	45

EARLY CHILDHOOD EDUCATION
School-Age Certificate Program (C5522004)

MAJOR COURSES: **SHC**

EDU 131   Child, Family, & Commun 3

EDU 144   Child Development I 3

EDU 145   Child Development II 3
   OR
      PSY 244   Child Development I...3
      PSY 245   Child Development II..3

EDU 146   Child Guidance 3

EDU 235   School-Age Dev & Program...3

EDU 275   Effective Teach Train..2

OTHER REQUIRED COURSES:

ACA 111   College Student Success...1

Total Credit Hours Required 18

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG 090   Composition Strategies...3

RED 090   Improved College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

School-Age Cert. Suggested Sequence (C5522004)

Fall - 1st year

ACA 111	College Student Success	1	0	0	1
EDU 131	Child Family & Commun	3	0	0	3
*EDU 144	Child Development I	3	0	0	3
EDU 235	School-Age Dev & Program	3	0	0	3
	Total	10	0	0	10

Spring - 1st year

*EDU 145	Child Development II	3	0	0	3
EDU 146	Child Guidance	3	0	0	3
EDU 275	Effective Teacher Training	2	0	0	2
	Total	8	0	0	8
	Grand Total	18	0	0	18

INFANT/TODDLER CARE - Certificate Prog. (C55290)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. The Certificate is awarded graduates of this curriculum. The curriculum prepares individuals to work with children from infancy to three years of age in diverse learning environments. Students will combine learned theories, competency-based knowledge, and practice in actual settings with young children under the supervision of qualified teachers. Course work includes infant/toddler growth and development: physical/nutritional needs of infants and toddlers; safety issues in the care of infants and toddlers; care and guidance; communication skills with parents and children; design and implementation of appropriate curriculum; and other related topics. Graduates should be prepared to plan and implement developmentally appropriate infant/toddler programs in early childhood settings. Employment opportunities include child development and child care programs, preschools, public and private schools, recreational centers, Early Head Start Programs, and other infant/toddler programs.

MAJOR COURSES: **SHC**

EDU 119   Intro to Early Child Educ...4

EDU 131   Child, Family & Commun 3

EDU 153   Health, Safety & Nutrit...3

EDU 234   Infants, Toddlers, & Twos...3

EDU Child Development Elective...3
      (Select a course from the following)
      EDU 144   Child Development I 3
      PSY 244   Child Development I 3

OTHER REQUIRED COURSES:

ACA 111   College Student Success...1

Total Credit Hours Required:...17

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG 090   Composition Strategies...3

RED 090   Improved College Reading...4

Infant/Toddler Care Cert. Prog, (C55290) Suggested Sequence

Fall - 1st year

ACA 111	College Student Success	1	0	0	1
EDU 119	Intro to Early Childhood Education	4	0	0	4
EDU 131	Child, Family and Community	3	0	0	3
	Child Development Elective	3	0	0	3
	Total	11	0	0	11

Spring - 1st year

EDU 153	Health, Safety and Nutrition	3	0	0	3
EDU 234	Infants, Toddlers, & Twos	3	0	0	3
	Total	6	0	0	6
	Grand Total	17	0	0	17

ELECTRICAL/ELECTRONICS TECHNOLOGY
Diploma Program (D35220)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day -- two semesters full-time attendance; Evening -- four semesters full-time attendance. The Diploma is awarded graduates of this curriculum. 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 AC/DC 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.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG 102   Applied Communications II 3
    OR
ENG 111   Expository Writing 3
Natural Sciences/Mathematics:
MAT 101   Applied Mathematics I 3
    OR
MAT 115   Mathematical Models 3

MAJOR COURSES:
BPR 111   Blueprint Reading..2
ELC 112   DC/AC Electricity 5
ELC 113   Basic Wiring I..4
ELC 115   Industrial Wiring...4
ELC 117   Motors and Controls 4
ELC 118   National Electrical Code 2
ELC 119   NEC Calculations 2
ELC 128   Intro to PLC 3
ELN 229   Industrial Electronics..4

Total Credit Hours Required 36

DEVELOPMENTAL COURSE REQUIREMENTS*
MAT   DMA 010, DMA 020, DMA 030 3
RED   080   Intro to College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Electrical/Electronics Technology Diploma • D35220
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
BPR 111 Blueprint Reading	1	2	0	2
ELC 112 DC/AC Electricity	3	6	0	5
ELC 113 Basic Wiring I	2	6	0	4
ELC 118 National Electrical Code	1	2	0	2
ELC 119 NEC Calculations	1	2	0	2
MAT 101 Applied Mathematics I	2	2	0	3
OR MAT 115 Mathematical Models	2	2	0	3
Total	10	20	0	18
Spring - 1st year				
ELC 115 Industrial Wiring	2	6	0	4
ELC 117 Motors and Controls	2	6	0	4
ELC 128 Intro to PLC	2	3	0	3
ELN 229 Industrial Electronics	2	4	0	4
ENG 102 Applied Communications II	3	0	0	3
OR ENG 111 Expository Writing	3	0	0	3
Total	11	19	0	18
Grand Total	21	39	0	36

Elect/Elect Tech Diploma • D35220
Suggested Prog Seq Evening

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
ELC 113 Basic Wiring I	2	6	0	4
ELC 118 National Electrical Code	1	2	0	2
MAT 101 Applied Mathematics I	2	2	0	3
OR MAT 115 Mathematical Models	2	2	0	3
Total	5	10	0	9
Spring - 1st year				
BPR 111 Blueprint Reading	1	2	0	2
ELC 112 DC/AC Electricity	3	6	0	5
ELC 119 NEC Calculations	1	2	0	2
ENG 102 Applied Communications II	3	0	0	3
OR ENG 111 Expository Writing	3	0	0	3
Total	8	10	0	12
Fall - 2nd year				
ELC 117 Motors and Controls	2	6	0	4
ELN 229 Industrial Electronics	2	4	0	4
	0	0	0	0
Total	4	10	0	8
Spring - 2nd year				
ELC 115 Industrial Wiring	2	6	0	4
ELC 128 Intro to PLC	2	3	0	3
Total	4	9	0	7
Grand Total	21	39	0	36

Electrical/Electronics Technology
Electrical Installation Concentration - Cert. Prog. (C35220)

MAJOR COURSES: **SHC**
BPR   111   Blueprint Reading...2
ELC   113   Basic Wiring I...4
ELC   115   Industrial Wiring..4
ELC   118   National Electrical Code.....................................2

Total Credit Hours Required 12

DEVELOPMENTAL COURSE REQUIREMENTS*
RED   080   Intro to College Reading..4

Electrical/Installation Concentration (C35220)
Certificate Program Suggested Sequence

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
BPR 111 Blueprint Reading	1	2	0	2
ELC 113 Basic Wiring I	2	6	0	4
ELC 118 National Electrical Code	1	2	0	2
Total	4	10	0	8
Spring - 1st year				
ELC 115 Industrial Wiring	2	6	0	4
Total	2	6	0	4
Grand Total	6	16	0	12

ELECTRONEURODIAGNOSTIC TECHNOLOGY
A.A.S. Program (A45320)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Some general education courses are offered at night. Minimum time for completion: four semesters. The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Electroneurodiagnostic Technology curriculum is designed to provide students with the knowledge and skills to obtain recordings of patients' nervous system functions through the use of electroencephalographic equipment and other electrophysiological devices. Course work includes communication skills with patients and healthcare personnel, taking appropriate patient histories, electrode application, documentation of patients' clinical status, electrical waveform recognition, management of medical emergencies, and preparation of descriptive reports for the physician. Graduates will qualify to take the ABRET (American Board of Registration of EEG and EP Technologists) Exam and, working under the supervision of a qualified physician, may be employed by hospitals or private offices of neurologists and neurosurgeons.

GENERAL EDUCATION COURSES: SHC

English/Communications:
ENG   111   Expository Writing 3
English Elective 3
    Students are required to take one (1) course from the following:
    ENG   112   Argument-Based Research 3
    ENG   113   Literature-Based Research...............3
    ENG   114   Prof Research & Reporting 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
Social/Behavioral Sciences:
PSY   150   General Psychology......................................3

MAJOR COURSES:

BIO	168	Anatomy and Physiology I 4
BIO	169	Anatomy and Physiology II...........................4
CIS	110	Introduction to Computers............................3
EDT	110	Neuroscience/Pathol Cond 4
EDT	111	Laboratory Management 1
EDT	111A	EDT Laboratory Basics 1
EDT	112	Instrument/Record Methods 3
EDT	113	Clinical Correlates 2
EDT	114	Special Procedures 3
EDT	115	EDT Laboratory Practice 2
EDT	116	EDT Clinical Experience 12
EDT	118	EDT Laboratory Practice II 3
ELC	111	Intro to Electricity..3
MED	118	Medical Law and Ethics 2
MED	121	Medical Terminology I 3
MED	122	Medical Terminology II 3

Total Credit Hours Required 68

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals...............................3
ENG	090	Composition Strategies..................................3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED	090	Improved College Reading............................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Electroneurodiagnostic Technology • A45320
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
EDT 110	Neuroscience/Pathol Cond	4	0	0	4
EDT 111	Laboratory Management	1	0	0	1
EDT 111A	EDT Laboratory Basics	1	0	0	1
ENG 111	Expository Writing	3	0	0	3
MED 121	Medical Terminology I	3	0	0	3
PSY 150	General Psychology	3	0	0	3
	Total	17	2	0	18
Spring - 1st year					
BIO 169	Anatomy and Physiology II	3	3	0	4
EDT 112	Instrumental/Record Methods	3	0	0	3
EDT 113	Clinical Correlates	2	0	0	2
EDT 115	EDT Laboratory Practice	0	6	0	2
ELC 111	Intro to Electricity	2	2	0	3
ENG 112	Argument - Based Research	3	0	0	3
	OR ENG 113 - Literature - Based Research				
	OR ENG 114 - Prof Research & Reporting				
	Total	13	11	0	17
Fall - 2nd year					
EDT 114	Special Procedures	3	0	0	3
EDT 118	EDT Laboratory Practice II	0	9	0	3
MAT 115	Mathematical Models	2	2	0	3
MED 118	Medical Law and Ethics	2	0	0	2
MED 122	Medical Terminology II	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	13	11	0	17
Spring - 2nd year					
EDT 116	EDT Clinical Experience	0	0	36	12
	Total	0	0	36	12
	Grand Total	43	24	36	64

Note: Students must complete BIO 168, Anatomy & Physiology I, 4 credits hours, prior to admission into the program.

ELECTRONICS ENGINEERING TECHNOLOGY
A.A.S. Program (A40200)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day -- five semesters full-time attendance; Evening -- ten semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. The Electronics 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 fundamentals, 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.

GENERAL EDUCATION COURSES: SHC
English/Communications:
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting..............................	3
	OR		
ENG	112	Argument-Based Research	3
	OR		
ENG	113	Literature-Based Research...............................	3

Humanities/Fine Arts:
Elective		....	3

Natural Sciences/Mathematics:
MAT	121	Algebra/Trigonometry I.................................	3

Social/Behavioral Sciences:
Elective		....	3

MAJOR COURSES:
CSC	134	C++ Programming	3
DFT	117	Technical Drafting	2
DFT	151	CAD I	3
EGR	110	Intro to Engineering Tech	2
ELC	138	DC Circuit Analysis....................................	4
ELC	139	AC Circuit Analysis....................................	4
ELC	229	Applications Project	2
ELN	131	Semiconductor Applications........................	4
ELN	132	Linear IC Applications................................	4
ELN	133	Digital Electronics	4
ELN	234	Communication Systems	4
MAT	122	Algebra/Trigonometry II	3
PHY	131	Physics-Mechanics	4
EET Electives		....	10

Students are required to take a minimum of 10 SHC from the following:

ELC	135	Electrical Machines I....................................	3
ELC	136	Electrical Machines II..................................	4
ELN	231	Industrial Controls	3
ELN	235	Data Communication System	4
ELN	260	Prog Logic Controllers	4
PHY	133	Physics-Sound & Light................................	4

Co-op Option: Qualified students may elect to take up to 2 credit hours of cooperative education in place of ELC 229.

Physics Note: Students planning to transfer to a 4-year college should consider taking PHY 131 & PHY 133. Please see your advisor.

Total Credit Hours Required 68

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG	090	Composition Strategies................................	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading...........................	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Electronics Engineering Technology • A40200
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CSC 134	C++ Programming	2	3	0	3
DFT 117	Technical Drafting	1	2	0	2
EGR 110	Intro to Engineering Tech	1	2	0	2
ELC 138	DC Circuit Analysis	3	3	0	4
MAT 121	Algebra/Trigonometry I	2	2	0	3
	Total	9	12	0	14
Spring - 1st year					
DFT 151	CAD I	2	3	0	3
ELC 139	AC Circuit Analysis	3	3	0	4
ELN 131	Semiconductor Applications	3	3	0	4
ENG 111	Expository Writing	3	0	0	3
MAT 122	Algebra/Trigonometry II	2	2	0	3
	Total	13	11	0	17
Summer - 1st year					
ENG 114	Prof Research & Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	6	0	0	6
Fall - 2nd year					
ELN 132	Linear IC Applications	3	3	0	4
ELN 133	Digital Electronics	3	3	0	4
PHY 131	Physics-Mechanics	3	2	0	4
	Electronics Engineering Technology Elective	2	2	0	3
	Total	11	10	0	15
Spring - 2nd year					
ELC 229	Applications Project	1	3	0	2
ELN 234	Communication Systems	3	3	0	4
	Social/Behavioral Science Elective	3	0	0	3
	Electronics Engineering Technology Elective	3	3	0	4
	Electronics Engineering Technology Elective	3	3	0	4
	Total	13	12	0	16
	Grand Total	50	45	0	68

Co-op Option: Qualified Students may elect to take up to 2 credit hours of cooperative education in place of ELC 229.

Physics Note: Students planning to transfer to a 4-year college should contact their advisor.

Electronic Engineering Technology Electives: The student is required to take a minimum of 10 credits from this list.

		Class	Lab	Clin/WkExp	Credit
ELC 135	Electrical Machines I	2	2	0	3
ELC 136	Electrical Machines II	3	3	0	4
ELN 231	Industrial Controls	2	3	0	3
ELN 235	Data Communications Systems	3	3	0	4
ELN 260	Prog Logic Controllers	3	3	0	4
PHY 133	Physics - Sound & Light	3	2	0	4

Electronics Engineering Technology • A40200
Suggested Program Sequence Evening

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
EGR 110	Intro to Engineering Tech	1	2	0	2
ELC 138	DC Circuit Analysis	3	3	0	4
MAT 121	Algebra/Trigonometry I	2	2	0	3
	Total	6	7	0	9
Spring - 1st year					
ELC 139	AC Circuit Analysis	3	3	0	4
MAT 122	Algebra/Trigonometry II	2	2	0	3
	Total	5	5	0	7
Summer - 1st year					
ENG 111	Expository Writing	3	0	0	3
	Social/Behavioral Science Elective	3	0	0	3
	Total	6	0	0	6
Fall - 2nd year					
DFT 117	Technical Drafting	1	2	0	2
ELN 131	Semiconductor Applications	3	3	0	4
	Total	4	5	0	6
Spring - 2nd year					
ELN 132	Linear IC Applications	3	3	0	4
ELN 133	Digital Electronics	3	3	0	4
	Total	6	6	0	8
Summer - 2nd year					
ENG 114	Prof Research & Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	6	0	0	6
Fall - 3rd year					
CSC 134	C++ Programming	2	3	0	3
	Electronics Engineering Technology Elective	2	2	0	3
	Total	4	5	0	6
Spring - 3rd year					
DFT 151	CAD I	2	3	0	3
	Electronics Engineering Technology Elective	3	3	0	3
	Total	5	6	0	6
Fall - 4th year					
ELN 234	Communication Systems	3	3	0	4
PHY 131	Physics-Mechanics	3	2	0	4
	Total	6	5	0	8
Spring - 4th year					
ELC 229	Applications Project	1	3	0	2
	Electronics Engineering Technology Elective	3	3	0	4
	Total	4	6	0	6
	Grand Total	50	45	0	68

Co-op Option: Qualified students may elect to take up to 2 credit hours of cooperative education in place of ELC 229.

Physics Notes: Students planning to transfer to a 4-year college should contact their advisor.

Electronic Engineering Technology Electives: The student is required to take a minimum of 10 credits from this list

		Class	Lab	Clin/WkExp	Credit
ELC 135	Electrical Machines I	2	2	0	3
ELC 136	Electrical Machines II	3	3	0	4
ELN 231	Industrial Controls	2	3	0	3
ELN 235	Data Communications Systems	3	3	0	4
ELN 260	Prog Logic Controllers	3	3	0	4
PHY 133	Physics-Sound & Light	3	2	0	4

EMERGENCY MEDICAL SCIENCE
A.A.S. Program (A45340)

The Emergency Medical Science Curriculum is Accredited by the Commission on Accreditation of Allied Health Education Programs, (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).
The Emergency Medical Science curriculum is designed to prepare graduates to enter the workforce as paramedics. Additionally, the program can provide an Associate Degree for individuals desiring an opportunity for career enhancement. The course of study provides the student an opportunity to acquire basic and advanced life support knowledge and skills by utilizing classroom instruction, practical laboratory sessions, hospital clinical experience, and field internships with emergency medical service agencies. Students progressing through the program may be eligible to apply for both state and national certification exams. Employment opportunities include ambulance services, fire and rescue agencies, air medical services, specialty areas of hospitals, industry, educational institutions, and government agencies.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG	111	Expository Writing	3
ENG	114 OR	Prof Research & Reporting	3
ENG	112 OR	Argument-Based Research	3
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:
Elective			3

Natural Sciences/Mathematics:
BIO	168	Anatomy and Physiology I	4
BIO	169	Anatomy and Physiology II	4

Social/Behavioral Sciences:
PSY	150	General Psychology	3

MAJOR COURSES:
CIS	110	Introduction to Computers	3
EMS	110	EMT-Basic	7
EMS	120	Intermediate Interventions	3
EMS	121	EMS Clinical Practicum I	2
EMS	130	Pharmacology I for EMS	2
EMS	131	Adv Airway Management	2
EMS	140	Rescue Scene Management	2
EMS	150	Emerg Vehicles & EMS Comm	2
EMS	210	Adv Patient Assessment	2
EMS	220	Cardiology	4
EMS	221	EMS Clinical Practicum II	3
EMS	231	EMS Clinical Pract III	3
EMS	235	EMS Management	2
EMS	240	Special Needs Patients	2
EMS	241	EMS Clinical Practicum IV	3
EMS	250	Advanced Medical Emergencies	3
EMS	260	Advanced Trauma Emergencies	2
EMS	270	Life Span Emergencies	3
EMS	285	EMS Capstone	2

Total Credit Hours Required 72

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	4
MAT	DMA 010, DMA 020, DMA 030, DMA 040		4
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Emergency Medical Science
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
EMS 110	EMT Basic	5	6	0	7
EMS 150	Emergency Vehicles & EMS Comm	1	3	0	2
BIO 169	Anatomy and Physiology II	3	3	0	4
	Total	9	12	0	13
Spring - 1st year					
EMS 120	Intermediate Interventions	2	3	0	3
EMS 121	Clinical Practicum I	0	0	6	2
EMS 130	Pharmacology I for EMS	1	3	0	2
EMS 131	Adv Airway Management	1	2	0	2
CIS 110	Introduction to Computers	2	2	0	3
	Total	6	10	6	12
Summer - 1st year					
EMS 210	Adv Patient Assessment	1	3	0	2
EMS 221	EMS Clinical Practicum II	0	0	9	3
EMS 250	Advanced Medical Emergencies	2	3	0	3
EMS 260	Advanced Trauma Emergencies	1	3	0	2
PSY 150	General Psychology	3	0	0	3
	Total	7	9	9	13
Fall - 2nd year					
EMS 140	Rescue Scene Management	1	3	0	2
EMS 220	Cardiology	2	6	0	4
EMS 231	EMS Clinical Pract III	0	0	9	3
EMS 270	Life Span Emergencies	2	2	0	3
ENG 111	Expository Writing	3	0	0	3
	Total	8	11	9	15
Spring - 2nd year					
EMS 235	EMS Management	2	0	0	2
EMS 240	Special Needs Patients	1	2	0	2
EMS 241	EMS Clinical Practicum IV	0	0	9	3
EMS 285	EMS Capstone	1	3	0	2
ENG 114	Prof Research & Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	10	5	9	15
	Grand Total	40	47	33	68

Note: Students must complete BIO 168, Anatomy & Physiology I, 4 credit hours, prior to admission into the program.

EMERGENCY MEDICAL SCIENCE CURRICULUM
Certificate Paramedic Advancement Program (A4534009)

This special track was developed to facilitate a North Carolina certified paramedic in returning to school to obtain an Associate in Applied Science Degree. The length of this course varies depending on the individual's experience and prior education. In order to enable the most rapid completion of the CPA Program the following prerequisites and/or admission requirements will be used:

1. Meet CVCC's institutional requirements for admissions as an EMS student.
2. Two years of full or four years of part-time employment as a field paramedic in an Advanced Life Support system.
3. Valid North Carolina paramedic certification.
4. Two letters of reference will be required: one from an immediate supervisor and one from the service's Medical Director attesting to the individual's competence in basic and advanced life support skills.
5. Successful completion of the (EVOC/ADM) Emergency Vehicle Operation Course/ Advanced Driving Maneuvers.
6. Once the criterion above has been met, the student will then be offered advance placement exams in the following courses so as to facilitate their movement through the program. To successfully advance place a course all skills required for the course must be successfully completed and the written exam must be passed with a grade of "B" or higher.

    A. EMS 110   EMT-Basic
    B. EMS 120   Intermediate Interventions
    C. EMS 130   Pharmacology I for EMS
    D. EMS 131   Advanced Airway Management
    E. EMS 210   Advanced Patient Assessment
    F. EMS 250   Advanced Medical Emergencies
    G. EMS 260   Advanced Trauma Emergencies
    H. EMS 220   Cardiology
    I. EMS 270   Life Span Emergencies
    J. EMS 240   Special Needs Patients

The student may transfer and/or advance place up to sixty-five percent of the required course hours. This track will be highly individualized depending on any prior college credits by the student and their success with advanced placement scores.

ENTREPRENEURSHIP
A.A.S. Program (A25490)

The Entrepreneurship curriculum is designed to provide students with the knowledge and the skills necessary for employment and growth as self-employed business owners. Course work includes developing a student's ability to make informed decisions as future business owners. Courses include entrepreneurial concepts learned in innovation and creativity, business funding, and marketing. Additional course work includes computers and economics. Through these skills, students will have a sound education base in entrepreneurship for lifelong learning. Graduates are prepared to be self-employed and open their own businesses.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3

Humanities/Fine Arts:
Elective			3

Social/Behavioral Sciences:
Elective			3

Natural Sciences/Mathematics:
MAT	115	Mathematical Models	3
	OR		
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1

MAJOR COURSES:
ACC	120	Prin of Financial Acct	4
BUS	110	Introduction to Business	3
BUS	139	Entrepreneurship I	3
BUS	240	Business Ethics	3
BUS	245	Entrepreneurship II	3
BUS	253	Leadership and Mgt Skills	3
CIS	110	Introduction to Computers	3
COE	110	World of Work	1
ECO	251	Prin of Microeconomics	3
ETR	215	Law for Entrepreneurs	3
ETR	220	Innovation and Creativity	3
ETR	230	Entreprener Marketing	3
ETR	240	Funding for Entrepreneurs	3
ETR	270	Entrepreneurship Issues	3

Entrepreneurship Electives: **9**
Entrepreneurship Electives: Students are required to take a minimum of 9SHC from the follow:
ACC	121	Prin of Managerial Accounting	4
BUS	125	Personal Finance	3
BUS	153	Human Resource Management	3
COE	XXX	World of Work	1
CTS	130	Spreadsheet	3
ECO	252	Prin of Macroeconomics	3
MKT	123	Fundamentals of Selling	3
MKT	220	Advertising and Sales Promotion	3
MKT	221	Consumer Behavior	3
MKT	223	Customer Service	3
RLS	112	Broker Prelicensing	3

Total Credit Hours Required **65-66**
DEVELOPMENTAL COURSE REQUIREMENTS*
CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080		8
RED	080	Intro to College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Entrepreneurship • A25490
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
BUS 110	Introduction to Business	3	0	0	3
BUS 139	Entrepreneurship I	3	0	0	3
ENG 111	Expository Writing	3	0	0	3
ETR 220	Innovation & Creativity	3	0	0	3
ETR 230	Entrepreneur Marketing	3	0	0	3
	Total	15	0	0	15
Spring - 1st year					
ACC 120	Principles of Financial Accounting	3	2	0	4
BUS 245	Entrepreneurship II	3	0	0	3
CIS 110	Introduction to Computers	2	2	0	3
ETR 215	Law for Entrepreneurs	3	0	0	3
MAT 115	Mathematical Models	2	2	0	3
OR MAT 161	College Algebra	3	0	0	3
and MAT 161A	College Algebra Lab	0	2	0	1
	Total	13/14	6	0	16/17
Fall - 2nd year					
BUS 240	Business Ethics	3	0	0	3
ECO 251	Microeconomics	3	0	0	3
ENG 114	Professional Research & Reporting	3	0	0	3
	Social/Behavioral Science Elective	3	0	0	3
	Entrepreneurship Elective	3	0	0	3
	Entrepreneurship Elective	3	0	0	3
	Total	18	0	0	18
Spring - 2nd year					
BUS 253	Leadership & Management Skills	3	0	0	3
COE 110	World of Work	1	0	0	1
ETR 240	Funding For Entrepreneur	3	0	0	3
ETR 270	Entrepreneurship	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Entrepreneurship Elective	3	0	0	3
	Total	16	0	0	16
	Grand Total	62/63	6	0	65/66

Entrepreneurship - Cert. Prog. (C25490)

MAJOR COURSES:			SHC
BUS	139	Entrepreneurship	3
BUS	245	Entrepreneurship II	3
ETR	220	Innovation and Creativity	3
ETR	230	Entrepreneur Marketing	3
Total Credit Hours Required:			**16**

Entrepreneurship Certificate Suggested Day Sequence (C25490)

Fall - 1st year					
BUS 139	Entrepreneurship I	3	0	0	3
ETR 220	Innovation & Creativity	3	0	0	3
ETR 230	Entrepreneur Marketing	3	0	0	3
	Total	9	0	0	9
Spring - 1st year					
BUS 245	Entrepreneurship II	3	0	0	3
	Total	3	0	0	3
	Grand Total	12	0	0	12

Entrepreneurship - Diploma Program (D25490)

GENERAL EDUCATION COURSES:			SHC
English/Communications:			
ENG	111	Expository Writing	3
Social/Behavioral Sciences:			
Elective			3
MAJOR COURSES:			
ACC	120	Prin of Financial Acct	4
BUS	110	Introduction to Business	3
BUS	139	Entrepreneurship I	3
BUS	245	Entrepreneurship II	3
BUS	253	Leadership and Mgt Skills	3
COE	110	World of Work	1
ECO	251	Prin of Microeconomics	3
ETR	215	Law for Entrepreneurs	3
ETR	220	Innovation and Creativity	3
ETR	230	Entrepreneur Marketing	3
ETR	270	Entrepreneurship Issues	3
Total Credit Hours Required:			**38**

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Entrepreneurship Diploma Suggested Day Sequence (D25490)

Fall - 1st year					
BUS 110	Introduction to Business	3	0	0	3
BUS 139	Entrepreneurship I	3	0	0	3
ENG 111	Expository Writing	3	0	0	3
ETR 230	Entrepreneur Marketing	3	0	0	3
	Total	12	0	0	12
Spring - 1st year					
ACC 120	Principles of Financial Accounting	3	2	0	4
BUS 245	Entrepreneurship II	3	0	0	3
ETR 215	Law for Entrepreneurs	3	0	0	3
ETR 270	Entrepreneurship	3	0	0	3
	Total	12	2	0	13
Fall - 2nd year					
BUS 253	Leadership & Management Skills	3	0	0	3
ECO 251	Microeconomics	3	0	0	3
ETR 220	Innovation & Creativity	3	0	0	3
	Total	9	0	0	9
Spring - 2nd year					
COE 110	World of Work	1	0	0	1
	Social/Behavioral Science Elective	3	0	0	3
	Total	4	0	0	4
	Grand Total	37	2	0	38

FIRE PROTECTION TECHNOLOGY
A.A.S. Program (A55240)

The Fire Protection Technology curriculum is designed to provide individuals with technical and professional knowledge to make decisions regarding fire protection for both public and private sectors. It also provides a sound foundation for continuous higher learning in fire protection, administration, and management. Course work includes classroom and laboratory exercises to introduce the student to various aspects of fire protection. Students will learn technical and administrative skills such as hydraulics, hazardous materials, arson investigation, fire protection safety, fire suppression management, law, and codes. Graduates should qualify for employment or advancement in governmental agencies, industrial firms, insurance rating organizations, educational organizations, and municipal fire departments. Employed persons should have opportunities for skilled and supervisory-level positions within their current organizations.

GENERAL EDUCATION COURSES: SHC

English/Communications:
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
	OR		
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:
Elective			3

Natural Sciences/Mathematics:
MAT	115	Mathematical Models	3
	OR		
MAT	140	Survey of Mathematics	3
MAT	140A	Survey of Mathematics Lab	1

Social/Behavioral Sciences:
PSY	150	General Psychology	3

MAJOR COURSES:
CIS	110	Introduction to Computers	3
FIP	120	Intro to Fire Protection	3
FIP	124	Fire Prevention & Public Ed	3
FIP	128	Detection & Investigation	3
FIP	132	Building Construction	3
FIP	136	Inspections & Codes	3
FIP	144	Sprinklers & Auto Alarms	3
FIP	148	Fixed & Port Exting Sys	3
FIP	152	Fire Protection Law	3
FIP	220	Fire Fighting Strategies	3
FIP	224	Fire Instructor I & II	4
FIP	228	Local Govt Finance	3
FIP	229	Fire Dynamics and Combust	3
FIP	236	Emergency Management	3
FIP	240	Fire Service Supervision	3
FIP	248	Fire Svc Personnel Adm	3
FIP	276	Managing Fire Services	3

Total Credit Hours Required 67-68

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT		DMA 010, DMA 020, DMA 030, DMA 040, DMA 050	5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Fire Protection Technology - Certificate (C5524001)
MAJOR COURSES:
FIP	220	Fire Fighting Strategies	3
FIP	224	Fire Instructor I & II	4
FIP	240	Fire Services Supervision	3
FIP	248	Fire Services Personnel Admin.	3
FIP	276	Managing Fire Services	3

Total Credit Hours Required: 16

Fire Protection Technology - Cert. Sug. Seq. (C5524001)

Fall - 1st year
FIP	220	Fire Fighting Strategies		3	0	0	3
FIP	276	Managing Fire Services		3	0	0	3
			Total	6	0	0	6

Spring - 1st year
FIP	224	Fire Instructor I & II		4	0	0	4
FIP	240	Fire Service Supervision		3	0	0	3
FIP	248	Fire Service Personnel Admin.		3	0	0	3
			Total	10	0	0	10
			Grand Total	16	0	0	16

Fire Protection Technology • A55240
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
FIP	120	Introduction to Fire Protection	3	0	0	3
FIP	124	Fire Prevention & Public Ed	3	0	0	3
FIP	220	Fire Fighting Strategies	3	0	0	3
FIP	276	Managing Fire Services	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
		Total	15	0	0	15
Spring - 1st year						
FIP	136	Inspection & Codes	3	0	0	3
FIP	144	Sprinklers & Auto Alarms	2	2	0	3
FIP	152	Fire Protection Law	3	0	0	3
FIP	224	Fire Instructor I & II	4	0	0	4
CIS	110	Introduction to Computers	3	0	0	3
		Total	15	2	0	16
Summer - 1st year						
MAT	115	Mathematical Models	2	2	0	3
	OR	MAT 140 Survey of Mathematics	3	0	0	3
		and MAT 140A Survey of Mathematics Lab	0	2	0	1
ENG	114	Prof. Research & Reporting	3	0	0	3
	OR	ENG 113 Literature-Based Research	3	0	0	3
PSY	150	General Psychology	3	0	0	3
		Total	8/9	2	0	9/10
Fall - 2nd year						
FIP	128	Detection I Investigation	3	0	0	3
FIP	132	Building Construction	3	0	0	3
FIP	148	Fixed & Port Exting System	2	2	0	3
FIP	236	Emergency Management	3	0	0	3
		Humanities/Fine Arts Elective	3	0	0	3
		Total	14	2	0	15
Spring - 2nd year						
FIP	228	Local Govt. Finance	3	0	0	3
FIP	229	Fire Dynamics & Combust	3	0	0	3
FIP	240	Fire Service Supervision	3	0	0	3
FIP	248	Fire Service Personnel Admin.	3	0	0	3
		Total	12	0	0	12
		Grand Total	64/65	6	0	67/68

Fire Protection Technology • A55240 Suggested Prog Seq Evening

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
FIP	120	Introduction to Fire Protection	3	0	0	3
FIP	124	Fire Prevention & Public Ed	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
		Total	9	0	0	9
Spring - 1st year						
FIP	136	Inspection & Codes	3	0	0	3
FIP	144	Sprinklers & Auto Alarms	2	2	0	3
CIS	110	Introduction to Computers	3	0	0	3
		Total	8	2	0	9
Summer - 1st year						
ENG	114	Prof. Research & Reporting	3	0	0	3
	OR	ENG 113 Literature-Based Research	3	0	0	3
PSY	150	General Psychology	3	0	0	3
		Total	6	0	0	6
Fall - 2nd year						
FIP	128	Detection I Investigation	3	0	0	3
FIP	132	Building Construction	3	0	0	3
FIP	148	Fixed & Port Exting System	2	2	0	3
		Total	8	2	0	9
Spring - 2nd year						
FIP	228	Local Govt. Finance	3	0	0	3
FIP	229	Fire Dynamics & Combust	3	0	0	3
		Total	6	0	0	6
Summer - 2nd year						
MAT	115	Mathematical Models	2	2	0	3
	OR	MAT 140 Survey of Mathematics	3	0	0	2
		and MAT 140A Survey of Mathematics Lab	0	2	0	1
		Total	2/3	2	0	3/4
Fall - 3rd year						
FIP	220	Fire Fighting Strategies	3	0	0	3
FIP	276	Managing Fire Services	3	0	0	3
		Total	6	0	0	6
Spring 3rd year						
FIP	152	Fire Protection Law	3	0	0	3
FIP	224	Fire Instructor I & II	4	0	0	4
		Total	7	0	0	7
Fall - 4th year						
FIP	236	Emergency Management	3	0	0	3
		Humanities/Fine Arts Elective	3	0	0	3
		Total	6	0	0	6
Spring - 4th year						
FIP	240	Fire Service Supervision	3	0	0	3
FIP	248	Fire Service Personnel Admin.	3	0	0	3
		Total	8	0	0	8
		Grand Total	64/65	6	0	67/68

FURNITURE UPHOLSTERY
Certificate Program

Courses required to meet graduation requirements in this curriculum are offered during evening hours only. Minimum time for completion: two semesters full-time attendance. A certificate is awarded graduates of this curriculum. The Furniture Upholstery curriculum prepares the student to become a professional upholsterer. Students are taught the fundamentals and techniques of furniture upholstery work starting with wooden frames, pattern development, industrial cutting, and sewing skills. Production quality and speed will be emphasized. Upon successful completion of the Furniture Upholstery program, the student will be able to develop patterns, lay out and cut cloth, and operate various sewing machines. Students will also perform spring-up procedures and do the inside and outside of upholstered furniture. Graduates of the Furniture Upholstery program should qualify for positions as pattern makers, fabric cutters, upholstery sewers, spring-ups, upholsterers, or outsiders.

FURNITURE UPHOLSTERY (Cutting and Sewing)
Day (C5022008) • Evening (C5022037)

MAJOR COURSES:			SHC
UPH	111	Cutting & Pattrn Makng I	3
UPH	112	Cutting & Pattrn Makng II	3
UPH	121	Sewing I	3
UPH	122	Sewing II	3
Upholstery Electives			3

Students are required to take one (1) course from the following:

UPH	123	Sewing III	3
UPH	131	Seat Construction I	3

All courses taught all semesters. Please see your advisor for assistance.

Total Credit Hours Required 15

Furniture Upholstery Cutting & Sewing
Suggested Program Sequence

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
UPH	111	Cutting & Pattern Makng I	1	4	0	3
UPH	112	Cutting & Pattern Makng II	1	4	0	3
UPH	121	Sewing I	1	4	0	3
UPH	122	Sewing II	1	4	0	3
		UPH Program Elective	1	4	0	3
		Grand Total	5	20	0	15
Spring - 1st year (Major Courses/If not taken in the Fall)						
UPH	111	Cutting & Pattern Makng I	1	4	0	3
UPH	112	Cutting & Pattern Makng II	1	4	0	3
UPH	121	Sewing I	1	4	0	3
UPH	122	Sewing II	1	4	0	3
		UPH Program Elective	1	4	0	3
		Grand Total	5	20	0	15

FURNITURE UPHOLSTERY (Upholstery)
Day (C5022007) • Evening (C502236)

MAJOR COURSES:			SHC
UPH	131	Seat Construction I	3
UPH	141	Inside Upholstery I	3
UPH	151	Outside Upholstery I	3
UPH	152	Outside Upholstery II	3
Upholstery Electives			3

Students are required to take one (1) courses from the following:

UPH	132	Seat Construction II	3
UPH	142	Inside Upholstery II	3

All courses taught all semesters. Please see your advisor for assistance.

Total Credit Hours Required 15

Furniture Upholstery
Suggested Program Sequence

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
UPH 131	Seat Construction II		1	4	0	3
UPH 141	Inside Upholstery I		1	4	0	3
UPH 151	Outside Upholstery I (First 8 weeks)		1	4	0	3
UPH 152	Outside Upholstery II (Second 8 weeks)		1	4	0	3
	UPH Program Elective		1	4	0	3
	Grand Total		5	20	0	15
Spring - 1st year (Major Courses/If not taken in the Fall)						
UPH 131	Seat Construction II		1	4	0	3
UPH 141	Inside Upholstery I		1	4	0	3
UPH 151	Outside Upholstery I (First 8 weeks)		1	4	0	3
UPH 152	Outside Upholstery II (Second 8 weeks)		1	4	0	3
	UPH Program Elective		1	4	0	3
	Grand Total		5	20	0	15

GENERAL OCCUPATIONAL TECHNOLOGY
A.A.S. Program (A55280)

The General Occupational Technology (GOT) curriculum provides individuals with an opportunity to upgrade their skills and earn an associate degree, diploma, or certificate by taking courses that offer specific job knowledge and skills.

The curriculum content will be individualized for students according to their occupational interests and needs. A program of study for each student will be developed from any non-developmental level courses from approved curriculum programs of study offered by the College.

Graduates will become more effective workers, better qualified for advancements within their field of employment, and better qualified for a wide range of entry-level employment opportunities.

All courses included in the GOT must be taken from approved Associate of Applied Science (AAS), diploma or certificate programs.

GENERAL EDUCATION (15 SHC)

Associate Degree programs must contain a minimum of 15 semester hours of general education coursework. The general education hours must include a minimum of 6 semester hours in communications and at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Diploma programs must contain a minimum of 6 semester hours of general education, 3 semester hours of which must be in communications. General education is optional in certificate programs.

MAJOR COURSES (49 SHC)
Program Courses

The General Occupational Technology Associate in Applied Science (AAS), diploma, and certificate programs must include courses which offer specific job knowledge and skills. The student must select and complete a minimum of 49 SHC from a combination of major courses for curriculums approved to be offered by the college. Work experience, including cooperative education, practicums, and internships, may be included in a degree program up to a maximum of 8 semester hours of credit, in a diploma up to a maximum of 4 semester hours credit, and in a certificate program up to a maximum of 2 semester hours of credit.

OTHER REQUIRED HOURS (0-7 SHC)

Local employer requirements, as well as college designated graduation requirements, may be accommodated in "other required hours". Up to a maximum of 7 semester hours of credit in other required hours may be included in an AAS degree program, 4 semester hours of credit in a diploma program, and 1 semester hour of credit in other required hours may be included in a certificate program. Any course in the Combined Course Library that is educationally relevant to the student's career objective may be used in other required hours, as long as it is not a restricted or unique course.

TOTAL SHC (64-76 SHC)

The total number of semester hour credit must include a minimum of 64 hours and a maximum of 76 hours.

GRAPHIC ARTS & IMAGING TECHNOLOGY
A.A.S. Program (A30180)

Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. The Graphics Arts and Imaging Technology curriculum is designed to provide students with knowledge and skills necessary for employment in the printing, publishing, packaging, and related industries. Students will receive hands-on training in computer publishing, imaging technology, offset lithography, screen printing, and emerging printing technologies. Training may also include flexography, graphic design, and multimedia. Graduates should qualify for career opportunities within the printing and publishing industries.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
| ENG | 111 | Expository Writing | 3 |
| ENG | 114 | Prof Research & Reporting | 3 |

Humanities/Fine Arts:
| Elective | | | 3 |

Natural Sciences/Mathematics:
| MAT | 140 | Survey of Mathematics | 3 |
| MAT | 140A | Survey of Mathematics Lab | 1 |

Social/Behavioral Sciences:
| Elective | | | 3 |

MAJOR COURSES:

BUS	110	Introduction to Business	3
GRA	121	Graphic Arts I	4
GRA	151	Computer Graphics I	2
GRA	152	Computer Graphics II	2
GRA	221	Graphic Arts II	4
GRA	252	Imaging Techniques	3
GRA	255	Image Manipulation I	2
GRA	256	Image Manipulation II	2
GRD	141	Graphic Design I	4
GRD	265	Digital Print Production	3
GRD	271	Multimedia Design I	2
MKT	120	Principles of Marketing	3
PRN	155	Screen Printing I	2
PRN	156	Screen Printing II	2
PRN	220	Offset Press Fundamentals	2
PRN	240	Print Estimating/Planning	3
Program Elective OR Co-op			6

Students are required to take 6 SHC from the following:
ART	264	Digital Photography	3
BUS	125	Personal Finance	3
BUS	137	Principles of Management	3
BUS	153	Human Resource Management	3
CIS	110	Introduction to Computers	3
COE	XXX	Co-op Work Experience	1-6
GRD	142	Graphic Design II	4
MKT	220	Advertising and Sales Promotion	3
MKT	221	Consumer Behavior	3
PHO	110	Fund of Photography	5

OTHER REQUIRED COURSES:
| ACA | 111 | College Student Success | 1 |

Co-op Option: Qualified students may elect to take up to 6 credit hours of cooperative education in place of 6 hours Program electives.

Total Credit Hours Required 66

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Graphic Arts and Imaging Technology • A30180
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ACA 111	College Student Success	1	0	0	1
GRA 121	Graphics Arts I	2	4	0	4
GRA 151	Computer Graphics I	1	3	0	2
GRD 141	Graphic Design I	2	4	0	4
ENG 111	Expository Writing	3	0	0	3
	Total	9	11	0	14
Spring - 1st year					
GRA 152	Computer Graphics II	1	3	0	2
GRA 255	Image Manipulation I	1	3	0	2
PRN 155	Screen Printing I	1	3	0	2
PRN 220	Offset Fundamentals	1	3	0	2
ENG 114	Prof Research & Reporting	3	0	0	3
	Program Elective OR Co-op Work Experience				3
	Total	7	12	0	14
Summer - 1st year					
BUS 110	Introduction to Business	3	0	0	3
MAT 140	Survey of Mathematics	3	0	0	3
MAT 140A	Survey of Mathematics Lab	0	2	0	1
	OR a higher Math				
	Social/Behavioral Science Elective	3	0	0	3
	Total	9	2	0	10
Fall - 2nd year					
GRA 252	Imaging Techniques	1	4	0	3
GRA 256	Image Manipulation II	1	3	0	2
GRD 265	Digital Print Production	1	4	0	3
GRD 271	Multimedia Design I	1	3	0	2
MKT120	Principles of Marketing	3	0	0	3
	Total	7	14	0	13
Spring - 2nd year					
PRN 156	Screen Printing II	1	3	0	2
PRN 240	Print Estimating/Planning	3	0	0	3
GRA 221	Graphic Arts II	2	4	0	4
	Humanities/Fine Arts Elective	3	0	0	3
	Program Elective OR Co-op Work Experience				3
	Total	9	7	0	15
	Grand Total	41	46	0	66

Program Electives- Must be selected from the following list:
ART 264, BUS 125, BUS 137, BUS 153, CIS 110, COE XXX, GRD 142, MKT 220, MKT 221, PHO 110.

Graphic Arts and Imaging Technology Certificate • (C30180)

MAJOR COURSES: **SHC**
GRA	121	Graphic Arts I	4
GRD	141	Graphic Design I	4
GRA	151	Computer Graphics I	2
GRA	152	Computer Graphics II	2
GRA	255	Image Manipulation I	2
PRN	155	Screen Printing I	2

Total Credit Hours Required 16

Graphic Arts and Imaging Technology Certificate • (C30180)
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
GRA 121	Graphics Arts I	2	4	0	4
GRD 141	Graphic Design I	2	4	0	4
GRA 151	Computer Graphics I	1	3	0	2
	Total	5	11	0	10
Spring - 1st year					
GRA 152	Computer Graphics II	1	3	0	2
GRA 255	Image Manipulation I	1	3	0	2
PRN 155	Screen Printing I	1	3	0	2
	Total	3	9	0	6
	Grand Total	8	20	0	16

HEALTH AND FITNESS SCIENCE (Pending)
A.A.S. Program (A45630)

Courses required to meet graduation requirements in this curriculum are offered during day hours. Minimum time for completion: five semesters full-time attendance. The Associate of Applied Science degree is awarded graduates of this curriculum. The Health and Fitness Science curriculum is accredited by the Commission on Accreditation for Health and Fitness.

The Health and Fitness Science program is designed to provide students with the knowledge and skills necessary for employment in the fitness and exercise industry. Students will be trained in exercise science and be able to administer basic fitness tests and health risk appraisals, teach specific exercise and fitness classes and provide instruction in the proper use of exercise equipment and facilities. Graduates should qualify for employment opportunities in commercial fitness clubs, YMCA's/YWCA's, wellness programs in business and industry, Parks & Recreation Departments and other organizations implementing exercise & fitness programs.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG 111 Expository Writing 3
ENG 112 Argument-Based Research.......................................3
OR
ENG 113 Literature-Based Research 3
OR
ENG 114 Prof Research & Reporting 3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT 115 Mathematical Models 3
OR
MAT 140 Survey of Mathematics...3
MAT 140A Survey of Mathematics Lab.................................1
PSY 150 General Psychology 3

MAJOR COURSES:
BIO 155 Nutrition..3
BIO 168 Anatomy and Physiology I 4
BIO 169 Anatomy and Physiology II 4
HEA 112 First Aid & CPR 2
PSF 110 Exercise Science 4
PSF 111 Fitness & Exer Testing I 4
PSF 116 Pvnt & Care Exer Injuries 3
PSF 118 Fitness Facility Mgmt 4
PSF 120 Group Exer Instruction 3
PSF 210 Personal Training 3
PSF 212 Exercise Programming 3
PSF 218 Lifestyle Chng & Wellness 4

OTHER MAJOR COURSES:
COE 111 Coop Work Experience I...1
PED 110 Fit and Well for Life 2
PSF 114 Phys Fit Theory & Instr 4
PSY 275 Health Psychology 3

PED Electives **2**
PED 113 Aerobics I 1
PED 117 Weight Training I.......................................1
PED 118 Weight Training II......................................1
PED 120 Walking for Fitness....................................1
PED 122 Yoga I 1

OTHER REQUIRED COURSES:

COM 110 Introduction to Communication..............................3

Total Credit Hours Required 70/71

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG 090 Composition Strategies..3
ENG 090A Comp Strategies Lab 1
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED 090 Improved College Reading 4

Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
ENG	111	Expository Writing	3	0	0	3
HEA	112	First Aid & CPR	1	2	0	2
PED	110	Fit And Well For Life	1	2	0	2
PSF	110	Exercise Science	4	0	0	4
PSY	150	General Psychology	3	0	0	3
		PED Elective	1	0	0	1
		Total	13	4	0	15
Spring - 1st year						
ENG	112	Argument-Based Research	3	0	0	3
	OR	ENG 113 Literature-Based Research	3	0	0	3
	OR	ENG 114 Prof Research & Reporting	3	0	0	3
BIO	168	Anatomy and Physiology	3	3	0	4
BIO	155	Nutrition	3	0	0	3
PSF	111	Fitness & Exer Testing I	3	2	0	4
PSF	114	Phys Fit Theory & Instr	4	0	0	4
		Total	16	5	0	18
Summer - 1st year						
MAT	115	Mathematical Models	3	0	0	3
	OR	MAT 140 Survey of Mathematics	3	0	0	3
		MAT 140A Survey of Mathematics Lab	0	2	0	1
		Humanities/Fine Arts Elective	3	0	0	3
		Total	6	2	0	6/7
Fall - 2nd year						
COE	111	Coop Work Experience I	0	0	10	1
COM	110	Introduction to Communication	3	0	0	3
BIO	169	Anatomy and Physiology II	3	3	0	4
PSF	116	Pvnt & Care Exer Injuries	2	2	0	3
PSF	120	Group Exer Instruction	2	2	0	3
		PED Elective	1	0	0	1
		Total	11	7	10	15
Spring - 2nd year						
PSF	118	Fitness Facility Mgmt	4	0	0	4
PSF	210	Personal Training	2	2	0	3
PSF	212	Exercise Programming	2	2	0	3
PSF	218	Lifestyle Chng & Wellness	3	2	0	4
PSF	275	Health Psychology	3	0	0	3
		Total	14	6	0	17
		Grand Total	60	24	10	71/72

HEALTH INFORMATION TECHNOLOGY
A.A.S. Program (A45360)

Courses required to meet graduation requirements in this curriculum are offered during day hours with selected courses offered during evening hours. Minimum time for completion: five semesters full-time attendance. The Associate of Applied Science degree is awarded graduates of this curriculum. The Health Information Technology curriculum is accredited by the Commission on Accreditation for Health Informatics and Information Management Education.

The Health Information Technology curriculum prepares individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage, and report health information. Students will supervise departmental functions; classify, code and index diagnoses and procedures; coordinate information for cost control, quality management, statistics, marketing, and planning; monitor governmental and non-governmental standards; facilitate research; and design system controls to monitor patient information security. Graduates of this program may be eligible to write the national certification examination to become a Registered Health Information Technician. Employment opportunities include hospitals, rehabilitation facilities, nursing homes, health insurance organizations, outpatient clinics, physicians' offices, hospice, and mental health facilities.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
English Elective 3

    Students are required to take one (1) course from the following:
    ENG   112   Argument-Based Research 3
    ENG   113   Literature-Based Research...........................3
    ENG   114   Prof Research & Reporting 3

Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
Social/Behavioral Sciences:
PSY   150   General Psychology...................................3

MAJOR COURSES:

BIO	168	Anatomy and Physiology I	4
BIO	169	Anatomy and Physiology II	4
BUS	137	Principles of Management	3
CIS	110	Introduction to Computers	3
OR			
CIS	111	Basic PC Literacy	2
DBA	110	Database Concepts	3
HIT	110	Fundamentals of HIM	3
HIT	112	Health Law and Ethics	3
HIT	114	Health Data Sys/Standards	3
HIT	122	Prof Practice Exp I	1
HIT	124	Prof Practice Exp II	1
HIT	210	Healthcare Statistics	3
HIT	211	ICD Coding	4
HIT	214	CPT/Other Coding Systems	2
HIT	215	Reimbursement Methodology	2
HIT	216	Quality Management	2
HIT	220	Health Informatics & EHRs	2
HIT	222	Prof Practice Exp III	2
HIT	226	Principles of Disease	3
HIT	280	Professional Issues	2
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3

Total Credit Hours Required 70-71

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Health Information Technology • (A45360)
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ENG 111	Expository Writing	3	0	0	3
MED 121	Med Term I	3	0	0	3
BIO 168	Anatomy & Phsciology I	3	3	0	4
HIT 110	Fundamentals of Health Info Mgmt	3	0	0	3
HIT 112	Health Law and Ethics	3	0	0	3
CIS 110	Intro to Computers	2	2	0	3
	OR CIS 111 Basic PC Lit.	1	2	0	2
	Total	16/17	5	0	18/19
Spring - 1st year					
ENG 112	Argument Based Research (Preferred)	3	0	0	3
	OR ENG 113 Literature Based Research				
	OR ENG 114 Prof Research & Reporting				
MED 122	Med Term II	3	0	0	3
BIO 169	Anatomy & Physiology II	3	3	0	4
DBA 110	Database Concepts	2	3	0	3
HIT 114	Health Data Sys/Standards	2	3	0	3
	Total	13	9	0	16
Summer - 1st year					
HIT 122	Prof Practice Exp I	0	0	3	1
	Humanities Elective	3	0	0	3
MAT 115	Mathematical Models	2	2	0	3
PSY 150	General Psychology	3	0	0	3
	Total	8	2	3	10
Fall - 2nd year					
HIT 210	Healthcare Statistics	2	2	0	3
HIT 211	ICD Coding	2	6	0	4
HIT 216	Quality Management	1	3	0	2
HIT 220	Health Informatics & EHRs	1	2	0	2
HIT 226	Principles of Disease	3	0	0	3
	Total	9	13	0	14
Spring - 2nd year					
HIT 124	Prof Practice Exp II	0	0	3	1
HIT 222	Prof Practice Exp III	0	0	6	2
HIT 214	CPT/Other Coding Systems	1	3	0	2
HIT 215	Reimbursement Methodology	1	2	0	2
BUS 137	Principles of Management	3	0	0	3
HIT 280	Professional Issues	2	0	0	2
	Total	7	5	9	12
	Grand Total	53/54	34	12	70/71

HEALTH INFORMATION TECHNOLOGY
Certificate Program (C45360)

Courses required to meet graduation requirements in this curriculum are offered during day hours with selected courses offered during evening hours. Minimum time for completion: two semesters part-time attendance. A certificate is awarded graduates of this curriculum.

MAJOR COURSES: **SHC**

CIS	110	Introduction to Computers	3
OR			
CIS	111	Basic PC Literacy	2
HIT	110	Fundamentals of HIM	3
HIT	112	Health Law and Ethics	3
HIT	114	Health Data Sys/Standards	3
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3

Total Credit Hours Required 17-18

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
RED	080	Intro to College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Health Information Technology Cert. Prog. (C45360)
Suggested Sequence

Fall - 2nd year

HIT	110	Fund of Health Information Mgmt	3	0	0	3
HIT	112	Health Law and Ethics	3	0	0	3
MED	121	Med Term I	3	0	0	3
		Total	9	0	0	9

Spring - 2nd year

HIT	114	Health Data Sys/Standards	2	3	0	3
MED	122	Med Term II	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
	OR	CIS 111 Basic PC Literacy	1	2	0	2
		Total	6/7	5	0	8/9
		Grand Total	15/16	5	0	17/18

HEALTHCARE MANAGEMENT TECHNOLOGY
A.A.S. Program (A25200)

Core courses, those specific to Healthcare Management Technology, are offered during day hours, as well as distance learning opportunities. Most other courses required to meet graduation requirements are offered by the above methods and evening hours. Minimum time for completion: Day -- five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Healthcare Management Technology curriculum is designed to prepare students for employment in healthcare business and financial operations. Students will gain a comprehensive understanding of the application of management principles to the healthcare environment. The curriculum places emphasis on planning, organizing, directing, and controlling tasks related to healthcare organizational objectives including the legal and ethical environment. Emphasis is placed on the development of effective communication, managerial, and supervisory skills. Graduates may find employment in healthcare settings including hospitals, medical offices, clinics, long-term care facilities, and insurance companies. Graduates are eligible to sit for several certification examinations offered by healthcare management professional organizations.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:

ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
	OR	ENG 112 Argument Based Research	3
	OR	ENG 113 Literature Based Research	3

Humanities/Fine Arts:

Elective			3

Natural Sciences/Mathematics:

MAT	115	Mathematical Models	3

Social/Behavioral Sciences:

Elective			3

MAJOR COURSES:

ACC	120	Prin of Financial Accounting	4
ACC	121	Prin of Managerial Accounting	4
CIS	110	Introduction to Computers	3
COE	XXX	Co-op Work Experience	2
CTS	130	Spreadsheet	3
HMT	110	Intro to Healthcare Mgt	3
HMT	210	Medical Insurance	3
HMT	211	Long-Term Care Admin	3
HMT	212	Mgt of Healthcare Org	3
HMT	220	Healthcare Financial Mgmt	4
HMT	225	Practice Management Sim	3
MED	114	Prof Interac in Heal Care	1
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3
OST	149	Medical Legal Issues	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2
OST	281	Emer Issues in Med Ofc	3

OTHER REQUIRED COURSES:

ACA	111	College Student Success	1

Total Credit Hours Required 68

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information

Health Care Management Technology • (A25200)
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
ACA 111 College Student Success	1	0	0	1
ACC 120 Prin of Financial Accounting	3	2	0	4
HMT 110 Intro to Healthcare Mgt	3	0	0	3
MED 114 Prof Interac in Heal Care	1	0	0	1
MED 121 Medical Terminology I (1st Eight Wks)	3	0	0	3
MED 122 Medical Terminology II (2nd Eight Wks)	3	0	0	3
Total	14	2	0	15
Spring - 1st year				
ACC 121 Prin of Managerial Accounting	3	2	0	4
CIS 110 Intro to Computers	2	2	0	3
HMT 210 Medical Insurance	3	0	0	3
OST 149 Medical Legal Issues	3	0	0	3
OST 281 Emer Issues in Med Ofc	3	0	0	3
Total	14	4	0	16
Summer - 1st year				
ENG 111 Expository Writing	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Social/Behavioral Science Elective	3	0	0	3
Total	9	0	0	9
Fall - 2nd year				
CTS 130 Spreadsheet	2	2	0	3
ENG 112 Argument-Based Research (Preferred)	3	0	0	3
OR ENG 113 Literature-Based Research	3	0	0	3
OR ENG 114 Pro Research & Reporting	3	0	0	3
(Students are highly encouraged to take ENG 114)				
HMT 211 Long-Term Care Admin	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
OST 247 Procedure Coding	1	2	0	2
Total	11	2	0	15
Spring - 2nd year				
HMT 212 Mgt. of Healthcare Org.	3	0	0	3
HMT 220 Healthcare Financial Mgmt	4	0	0	4
HMT 225 Practice Mgmt. Simulation	2	2	0	3
OST 248 Diagnostic Coding	1	2	0	2
COE *** Co-op Work Experience	0	0	20	2
Total	10	4	20	12
Grand Total	58	12	20	68

HEALTHCARE MANAGEMENT TECHNOLOGY
Healthcare Management Certificate Program (C25200)

MAJOR COURSES: SHC

HMT	110	Intro to Healthcare Mgt	3
HMT	210	Medical Insurance	3
HMT	211	Long-Term Care Admin	3
HMT	212	Mgt of Healthcare Org	3
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3

Total Credit Hours Required 18

DEVELOPMENTAL COURSE REQUIREMENTS*

RED   080   Intro to College Reading..................................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions.

HealthCare Management Technology Cert. Prog. (C25200)
Suggested Sequence

	Class	Lab	Clin	Credit
Fall - 1st year				
HMT 110 Intro to Healthcare Mgt	3	0	0	3
MED 121 Medical Terminology I (1st 8 weeks)	3	0	0	3
MED 122 Medical Terminology II (2nd 8 weeks)	3	0	0	3
Total	9	0	0	9
Spring - 1st year				
HMT 210 Medical Insurance	3	0	0	3
HMT 211 Long-Term Care Admin	3	0	0	3
HMT 212 Mgt of Healthcare Org	3	0	0	3
Total	9	0	0	9
Grand Total	18	0	0	18

HEALTHCARE MANAGEMENT TECHNOLOGY
Healthcare Receptionist
Certificate Program (C2520005)

MAJOR COURSES: SHC

HMT	110	Intro to Healthcare Mgt	3
HMT	210	Medical Insurance	3
MED	114	Prof Interac in Heal Care	1
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3
OST	149	Medical Legal Issues	3

Total Credit Hours Required 16

DEVELOPMENTAL COURSE REQUIREMENTS*

RED   080   Intro to College Reading..................................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information

Healthcare Management Technology
Healthcare Receptionist (C2520005)
Certificate Program Suggested Sequence

	Class	Lab	Clin	Credit
Fall - 1st year				
HMT 110 Intro to Healthcare Mgt	3	0	0	3
MED 121 Medical Terminology I (1st 8 weeks)	3	0	0	3
MED 122 Medical Terminology II (2nd 8 weeks)	3	0	0	3
Total	9	0	0	9
Spring - 1st year				
MED 114 Prof Interac in Heal Care	1	0	0	1
HMT 210 Medical Insurance	3	0	0	3
OST 149 Medical Legal Issues	3	0	0	3
Total	7	0	0	7
Grand Total	16	0	0	16

HEALTHCARE MANAGEMENT TECHNOLOGY
Insurance
Certificate Program (C2520004)

MAJOR COURSES: SHC

HMT	110	Intro to Healthcare Mgt	3
HMT	210	Medical Insurance	3
MED	114	Prof Interac in Heal Care	1
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2

Total Credit Hours Required 17

DEVELOPMENTAL COURSE REQUIREMENTS*

RED   080   Intro to College Reading..................................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

HealthCare Management Technology Insurance (C2520004)
Certificate Program Suggested Sequence

	Class	Lab	Clin	Credit
Fall - 1st year				
HMT 110 Intro to Healthcare Mgt	3	0	0	3
MED 121 Medical Terminology I (1st 8 Wks)	3	0	0	3
MED 122 Medical Terminology II (2nd 8 Wks)	3	0	0	3
Total	9	2	0	9
Spring - 1st year				
MED 114 Prof Interac In Heal Care	1	0	0	1
HMT 210 Medical Insurance	3	0	0	3
OST 247 Procedure Coding	1	2	0	2
OST 248 Diagnostic Coding	1	2	0	2
Total	6	4	0	8
Grand Total	15	4	0	17

HORTICULTURE TECHNOLOGY
A.A.S. Program (A15240)

Most courses required to meet graduation requirements in this curriculum are offered during day hours only. Selected courses are offered each semester via the Internet. Minimum time for completion: Day -- five semesters full-time attendance for the full curriculum; Evening -- three semesters for the certificate program option. The Associate in Applied Science Degree is awarded graduates of this curriculum. A certificate is awarded graduates of the certificate program option. Special University Articulation Agreement with North Carolina State University: NCSU may accept up to 15 semester credit hours in Horticulture from CVCC toward the Bachelor of Science in Horticulture Degree. A course grade of C or higher for each course is required. For details, call Darrell Kiser at extension 4238. CVCC has an 2 + 2 Articulation Agreement with N.C. Agricultural and Technological State University in Horticulture.
These curricula are designed to prepare individuals for various careers in horticulture. Classroom instruction and practical laboratory applications of horticultural principles and practices are included in the program of study. Course work includes plant identification, pest management, plant science and soil science. Also included are courses in sustainable plant production and management, landscaping, and the operation of horticulture businesses. Graduates should qualify for employment in a variety of positions associated with nurseries, garden centers, greenhouses, landscape operations, governmental agencies/parks, golf courses, sports complexes, highway vegetation, turf maintenance companies, and private and public gardens. Graduates should also be prepared to take the North Carolina Pesticide Applicator's Examination and/or the North Carolina Certified Plant Professional Examination. A program that focuses on the general production and management of cultivated plants, shrubs, flowers, foliage, trees, groundcovers, and related plant materials; the management of technical and business operations connected with horticultural services; and the basic scientific principles needed to understand plants and their management and care.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
		OR	
ENG	112	Argument-Based Research	3
		OR	
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT 115 Mathematical Models 3
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES :
HOR	110	Intro to Landscaping	2
HOR	112	Landscape Design I	3
HOR	114	Landscape Construction	3
HOR	116	Landscape Management I	3
HOR	118	Equipment Op & Maint	2
HOR	134	Greenhouse Operations	3
HOR	160	Plant Materials I	3
HOR	162	Applied Plant Science	3
HOR	164	Hort Pest Management	3
HOR	166	Soils & Fertilizers	3
HOR	168	Plant Propagation	3
HOR	170	Hort Computer Apps	2
HOR	213	Landscape Design II	3
HOR	215	Landscape Irrigation	3
HOR	260	Plant Materials II	3
HOR	265	Adv Plant Materials	2
HOR	273	Hor Mgmt & Marketing	3
TRF	110	Intro Turfgrass Cult & ID	4

Co-op or Horticulture Elective........ 4
Please choose from the following:
COE	XXX	Co-op	1-4
HOR	255	Interiorscapes	2
SPA	120	Spanish for the Workplace	3
TRF	120	Turfgrass Irrigat & Design	4
TRF	125	Turfgrass Computer App	2
TRF	130	Native Flora ID	2
TRF	140	Turfgrass Mgmt Safety	3
TRF	150	Landscape Drafting	2
TRF	151	Intro Landscape Design	3
TRF	152	Landscape Maintenance	3
TRF	210	Turfgrass Eqmt Mgmt	3
TRF	220	Turfgrass Calculations	2
TRF	230	Turfgrass Mgmt Apps	2
TRF	250	Golf /Sport Field Const	4
TRF	260	Adv Turfgrass Mgmt	4

Con't.

Horticulture Technology, Con't.

Total Credit Hours Required **70**
DEVELOPMENTAL COURSE REQUIREMENTS*
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Horticulture Technology • A15240
Suggested Program Sequence Day

Course		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
TRF 110	Intro Turfgrass Cult & ID	3	2	0	4
HOR 118	Equipment Op & Maint	1	3	0	2
HOR 162	Applied Plant Science	2	2	0	3
HOR 166	Soils and Fertilizers	2	2	0	3
ENG 111	Expository Writing	3	0	0	3
	Total	11	9	0	15
Spring - 1st year					
MAT 115	Mathematical Models	2	2	0	3
HOR 168	Plant Propagation	2	2	0	3
HOR 160	Plant Materials I	2	2	0	3
HOR 116	Landscape Management I	2	2	0	3
HOR 110	Intro To Landscaping	1	2	0	2
ENG 114	Prof Research and Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
	Total	12	10	0	17
Summer - 1st year					
HOR 112	Landscape Design I	2	3	0	3
HOR 114	Landscape Construction	2	2	0	3
HOR 260	Plant Materials II	2	2	0	3
	Total	6	7	0	9
Fall - 2nd year					
HOR 170	Horticulture Computer Apps	1	3	0	2
HOR 213	Landscape Design II	2	2	0	3
HOR 215	Landscape Irrigation	2	2	0	3
HOR 134	Greenhouse Operations	2	2	0	3
HOR 273	Hort. Bus. Mgmt.	3	0	0	3
	Hort/Turf Elective OR Co-Op Work Exp				2
	Total	10	9	0	16
Spring - 2nd year					
HOR 164	Horticulture Pest Management	2	2	0	3
HOR 265	Advanced Plant Materials	1	2	0	2
	Humanities/Fine Arts Elective	3	0	0	3
	Hort/Turf Elective OR Co-Op Work Exp	0			2
	Social/Behavioral Science Elective	3	0	0	3
	Total	9	4	0	13
	Grand Total	48	39	0	70

HORTICULTURE TECHNOLOGY Cert. Prog. (C15240)

MAJOR COURSES:... **SHC**
HOR	110	Intro to Landscaping	2
HOR	118	Equipment Op & Maint	2
HOR	134	Greenhouse Operations	3
HOR	164	Hort Pest Management	3
HOR	168	Plant Propagation	3
HOR	215	Landscape Irrigation	3
HOR	255	Interiorscapes	2

Total Credit Hours Required **18**

Horticulture Technology Cert. Prog. (C15240) Sug. Seq.

Course		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
HOR 110	Intro to Landscaping	1	2	0	2
HOR 118	Equipment Op & Maint	1	3	0	2
HOR 134	Greenhouse Operations	2	2	0	3
HOR 215	Landscape Imgation	2	2	0	3
	Total	6	9	0	10
Spring - 1st year					
HOR 164	Horticulture Pest Management	2	2	0	3
HOR 168	Plant Propagation	2	2	0	3
HOR 255	Interiorscapes	1	2	0	2
	Total	5	6	0	8
	Grand Total	11	15	0	18

HORTICULTURE TECHNOLOGY
Landscape Design
Diploma Program (D1524001)

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3

MAJOR COURSES :
HOR   110   Intro to Landscaping 2
HOR   112   Landscape Design I 3
HOR   114   Landscape Construction 3
HOR   160   Plant Materials I...3
HOR   162   Applied Plant Science 3
HOR   164   Hort Pest Management 3
HOR   166   Soils & Fertilizers 3
HOR   170   Hort Computer Apps 2
HOR   213   Landscape Design II 3
HOR   215   Landscape Irrigation 3
HOR   260   Plant Materials II 3
HOR   265   Adv Plant Materials 2

Total Credit Hours Required 39

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG   090   Composition Strategies..3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Horticulture Technology - Landscape Design (D1524001)
Suggested Sequence

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ENG 111	Expository Writing	3	0	0	3
HOR 162	Applied Plant Science	2	2	0	3
HOR 166	Soils and Fertilizers	2	2	0	3
HOR 170	Horticulture Computer Apps	1	3	0	2
HOR 112	Landscape Design I	2	3	0	3
HOR 215	Landscape Irrigation	2	2	0	3
	Total	12	12	0	17
Spring - 1st year					
MAT 115	Mathematical Models	2	2	0	3
HOR 110	Intro to Landscaping	1	2	0	2
HOR 160	Plant Materials I	2	2	0	3
HOR 164	Horticulture Pest Management	2	2	0	3
HOR 265	Advanced Plant Materials	1	2	0	2
	Total	8	10	0	13
Summer - 1st year					
HOR 213	Landscape Design II	2	2	0	3
HOR 114	Landscape Construction	2	2	0	3
HOR 260	Plant Materials II	2	2	0	3
	Total	6	6	0	9
	Grand Total	26	28	0	39

HORTICULTURE TECHNOLOGY
Landscape Management
Diploma Program (D1524002)

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3

MAJOR COURSES :
HOR   110   Intro to Landscaping 2
HOR   114   Landscape Construction 3
HOR   116   Landscape Management I 3
HOR   118   Equipment Op & Maint 2
HOR   160   Plant Materials I...3
HOR   162   Applied Plant Science 3

MAJOR COURSES (CONT.):
HOR   164   Hort Pest Management 3
HOR   166   Soils & Fertilizers 3
HOR   215   Landscape Irrigation 3
HOR   260   Plant Materials II 3
HOR   265   Adv Plant Materials 2
Co-op or Turf/Horticulture Elective..2
    Please choose from the following:
    COE   XXX 1-2
    HOR   255 3
    SPA   120   Spanish for the Workplace 3
    TRF   110   Intro Turfgrass Cult & ID 4
    TRF   120   Turfgrass Irrigat & Design 4
    TRF   125   Turfgrass Computer App 2
    TRF   130   Native Flora ID 2
    TRF   140   Turfgrass Mgmt Safety 3
    TRF   150   Landscape Drafting 2
    TRF   151   Intro Landscape Design 3
    TRF   152   Landscape Maintenance 3
    TRF   210   Turfgrass Eqmt Mgmt 3
    TRF   220   Turfgrass Calculations 2
    TRF   230   Turfgrass Mgmt Apps 2
    TRF   250   Golf /Sport Field Const 4
    TRF   260   Adv Turfgrass Mgmt 4

Total Credit Hours Required 37/38

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG   090   Composition Strategies..3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Horticulture Technology - Landscape Management (D1524002)
Suggested Sequence

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ENG 111	Expository Writing	3	0	0	3
HOR 118	Equipment Op & Maintenance	1	3	0	2
HOR 162	Applied Plant Science	2	2	0	3
HOR 166	Soils and Fertilizers	2	2	0	3
HOR 215	Landscape Irrigation	2	2	0	3
MAT 115	Math Models	2	2	0	3
	Total	12	11	0	17
Spring - 1st year					
HOR 110	Intro to Landscaping	1	2	0	2
HOR 116	Landscape Management I	2	2	0	3
HOR 160	Plant Materials I	2	2	0	3
HOR 164	Horticulture Pest Management	2	2	0	3
HOR 265	Advanced Plant Materials	1	2	0	2
	Co-op or HOR Elective				1/2
	Total	8	10	0	14/15
Summer - 1st year					
HOR 114	Landscape Construction	2	2	0	3
HOR 260	Plant Materials II	2	2	0	3
	Total	4	4	0	6
	Grand Total	24	25	0	37/38

INDUSTRIAL SYSTEMS TECHNOLOGY
A.A.S. Program (A50240)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. Minimum time for completion: Day—four semesters full-time attendance; Evening—eight semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.
The Industrial Systems Technology curriculum is designed to prepare or upgrade individuals to safely service, maintain, repair, or install equipment. Instruction includes theory and skill training needed for inspecting, testing, troubleshooting, and diagnosing industrial systems. Students will learn multi-craft technical skills in blueprint reading, mechanical systems maintenance, electricity, hydraulics/pneumatics, welding, machining or fabrication, and includes various diagnostic and repair procedures. Practical application in these industrial systems will be emphasized and additional advanced course work may be offered. Upon completion of this curriculum, graduates should be able to individually, or with a team, safely install, inspect, diagnose, repair, and maintain industrial process and support equipment. Students will also be encouraged to develop their skills as life-long learners.

GENERAL EDUCATION COURSES: **SHC**
English/Communications:
ENG   111   Expository Writing 3
ENG   114   Prof Research & Reporting...3
         OR
ENG   112   Argument-Based Research 3
         OR
ENG   113   Literatured-Based Research...3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
Social/Behavioral Sciences:
Elective 3
MAJOR COURSES:
BPR   111   Blueprint Reading 2
CIS   110   Introduction to Computers...3
         OR
CIS   111   Basic PC Literacy 2
ELC   112   DC/AC Electricity 5
ELC   113   Basic Wiring I...4
ELC   115   Industrial Wiring...4
ELC   117   Motors and Controls 4
ELC   118   National Electrical Code 2
ELC   119   NEC Calculations 2
HYD   110   Hydraulics/Pneumatics I 3
ISC   112   Industrial Safety...2
MAC   141   Machining Applications I 4
MAC   142   Machining Applications II 4
MNT   110   Intro to Maint Procedures 2
WLD   112   Basic Welding Processes 2
IST Program Electives 9

Students are required to take a minimum of 9 SHC from the following:
   AHR   110   Intro to Refrigeration 5
   AHR   112   Heating Technology.......................................4
   AHR   113   Comfort Cooling 4
   COE   XXX   Co-op Work Experience.............................. 1-3
   ELC   128   Intro to PLC 3
   ELN   229   Industrial Electronics....................................4
   MAC   122   CNC Turning 2
   MAC   124   CNC Milling 2
   MAC   222   Advanced CNC Turning 2
   MAC   224   Advanced CNC Milling 2
   WLD   110   Cutting Processes..2
   WLD   115   SMAW (Stick) Plate......................................5
         OR
   WLD   115AC   SMAW (Stick) Plate-AC................................2
   WLD   115BC   SMAW (Stick) Plate-BC................................2
   WLD   115CC   SMAW (Stick) Plate-CC................................1

Co-op Option: Qualified students may elect to take up to 3 credit hours of cooperative education in place of 3 hours Program Elective.

Total Credit Hours Required 66-67

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals..3
ENG   090   Composition Strategies..3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Industrial Systems Technology • A50240
Suggested Program Sequence Day

			Class	Lab	Clin/WkExp	Credit
Fall - 1st year						
BPR	111	Blueprint Reading	1	2	0	2
ELC	112	DC/AC Electricity	3	6	0	5
ELC	113	Basic Wiring I	2	6	0	4
ELC	118	National Electrical Code	1	2	0	2
ELC	119	NEC Calculations	1	2	0	2
		Total	8	18	0	15
Spring - 1st year						
ELC	115	Industrial Wiring	2	6	0	4
ELC	117	Motors and Controls	2	6	0	4
ENG	111	Expository Writing	3	0	0	3
MAT	115	Mathematical Models	2	2	0	3
		IST Program Elective	3	0	0	3
		Total	12	14	0	17
Summer - 1 year						
		Social/Behavioral Science Elective	3	0	0	3
		Humanities/Fine Arts Elective	3	0	0	3
		Total	6	0	0	6
Fall - 2nd year						
ISC	112	Industrial Safety	2	0	0	2
MAC	141	Machining Applications I	2	6	0	4
MAC	142	Machining Applications II	2	6	0	4
MNT	110	Intro to Maint Procedures	1	3	0	2
		IST Program Elective	3	0	0	3
		Total	10	15	0	15
Spring - 2nd year						
CIS	111	Basic PC Literacy	1	2	0	2
		OR CIS 110 Introduction to Computers	2	2	0	3
ENG	114	Prof. Research & Reporting (Preferred)	3	0	0	3
		OR ENG 112 Argument-Based Research	3	0	0	3
		OR ENG 113 Literature-Based Research	3	0	0	3
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
WLD	112	Basic Welding Processes	1	3	0	2
		IST Program Elective	3	0	0	3
		Total	10/11	8	0	13/14
		Grand Total	46/47	55	0	66/67

Co-op Option: Qualified students may elect to take up to 3 credit hours of cooperative education in place of 3 hours of Program Elective.

Industrial Systems Technology • A50240
Suggested Program Sequence Evening

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ELC 113	Basic Wiring I	2	6	0	4
ELC 118	National Electrical Code	1	2	0	2
MAT 115	Mathematical Models	2	2	0	3
	Total	5	10	0	9
Spring - 1st year					
ELC 112	DC/AC Electricity	3	6	0	5
ELC 119	NEC Calculations	1	2	0	2
BPR 111	Blueprint Reading	1	2	0	2
	Total	5	10	0	9
Fall - 2nd year					
ELC 117	Motors and Controls	2	6	0	4
	IST Program Elective	3	0	0	3
	Total	5	6	0	7
Spring - 2nd year					
ELC 115	Industrial Wiring	2	6	0	4
	IST Program Elective	3	0	0	3
	Total	5	6	0	7
Fall - 3rd year					
ENG 111	Expository Writing	3	0	0	3
MNT 110	Intro to Maint Procedures	1	3	0	2
	Social/Behavioral Science Elective	3	0	0	3
	Total	7	3	0	8
Spring - 3rd year					
CIS 111	Basic PC Literacy	1	2	0	2
OR CIS 110	Introduction to Computers	2	2	0	3
ENG 114	Prof. Research & Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
HYD 110	Hydraulics/Pneumatics I	2	3	0	3
	Total	6/7	5	0	8/9
Fall - 4th year					
ISC 112	Industrial Safety	2	0	0	2
MAC 141	Machining Applications I	2	6	0	4
WLD 112	Basic Welding Processes	1	3	0	2
	Total	5	9	0	8
Spring - 4th year					
MAC 142	Machining Applications II	2	6	0	4
	IST Program Elective	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	8	6	0	10
	Grand Total	46/47	55	0	66/67

Co-op Option: Qualified students may elect to take up to 3 credit hours of cooperative education in place of 3 hours of program elective.

Program electives: The student is required to take a minimum of 9 credits from this list.

			Class	Lab	Clin/WkExp	Credit
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	112	Heating Technology	2	4	0	4
AHR	113	Comfort Cooling	2	4	0	4
COE		Co-op Work Experience	0	0	10	1/3
ELC	128	Intro to PLC	2	3	0	3
ELN	229	Industrial Electronics	2	4	0	4
MAC	122	CNC Turning	1	3	0	2
MAC	124	CNC Milling	1	3	0	2
MAC	222	Advanced CNC Turning	1	3	0	2
MAC	224	Advanced CNC Milling	1	3	0	2
WLD	110	Cutting Processes	1	3	0	2
WLD	115	SMAW (Stick) Plate	2	9	0	5
WLD	115AC	SMAW (Stick) Plate-AC	1	3	0	2
WLD	115BC	SMAW (Stick) Plate-BC	1	3	0	2
WLD	115CC	SMAW (Stick) Plate-CC	0	3	0	1

INFORMATION SYSTEMS SECURITY
A.A.S. Program (A25270)

Courses required to meet graduation requirements in this curriculum are offered during day and evening hours. The Associate in Applied Science is awarded graduates of this curriculum.

Information Systems Security covers a broad expanse of technology concepts. This curriculum provides individuals with the skills required to implement effective and comprehensive information security controls. Course work includes networking technologies, operating systems administration, information policy, intrusion detection, security administration, and industry best practices to protect data communications. Graduates should be prepared for employment as security administrators. Additionally, they will acquire the skills that allow them to pursue security certifications.

GENERAL EDUCATION COURSES:			SHC
English/Communications:			
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
	OR		
ENG	113	Literatured-Based Research	3
Humanities/Fine Arts:			
Elective			3
Natural Sciences/Mathematics:			
MAT	140	Survey of Mathematics	3
MAT	140A	Survey of Mathematics Lab	1
	OR		
MAT	161	College Algebra	3
MAT	161A	College Albegra Lab	1
Social/Behavioral Sciences:			
Elective			3
MAJOR COURSES:			
CIS	110	Introduction to Computers	3
CIS	115	Intro to Prog & Logic	3
CTS	115	Info Sys Business Concept	3
DBA	110	Database Concepts	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NET	175	Wireless Technology	3
NET	225	Routing & Switching I	3
NET	226	Routing & Switching II	3
NOS	110	Operating System Concepts	3
NOS	120	Linux/UNIX Single User	3
NOS	130	Windows Single User	3
SEC	110	Security Concepts	3
SEC	150	Secure Communications	3
SEC	160	Secure Admin I	3
SEC	210	Intrusion Detection	3
SEC	220	Defense-In-Depth	3
SEC	240	Wireless Security	3
SEC	289	Security Capstone Project	3

Co-op Option: Qualified students may elect to take up to 3 credit hours of cooperative education in place of SEC 240.

Total Credit Hours Required:...73

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Information Systems Security • A25270
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
CIS 115	Intro to Prog & Logic	2	3	0	3
SEC 110	Security Concepts	2	2	0	3
NET 125	Networking Basics	1	4	0	3
DBA 110	Database Concepts & Apps	2	3	0	3
	Total	9	14	0	15
Spring - 1st year					
NET 126	Routing Basics	1	4	0	3
CTS 115	Info Sys Business Concepts	3	0	0	3
NOS 110	Operating System Concepts	2	3	0	3
ENG 111	Expository Writing	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	12	7	0	15
Summer - 1st year					
ENG 114	Prof Researach & Reporting	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
MAT 140	Survey of Math	3	0	0	3
OR	MAT 161 College Algebra	3	0	0	3
MAT 140A	Survey of Math Lab	0	2	0	1
OR	MAT 161 College Algebra	3	0	0	3
	MAT 161A College Albegra Lab	0	2	0	1
	Social/Behavioral Science Elective	3	0	0	3
	Total	9	2	0	10
Fall - 2nd year					
SEC 160	Secure Admin I	2	2	0	3
NET 175	Wireless Technology	2	2	0	3
NET 225	Routing & Switching I (1st eight week)	1	4	0	3
NET 226	Routing & Switching II (2nd eight week)	1	4	0	3
SEC 220	Defense-in-Depth	2	2	0	3
	Total	8	14	0	15
Spring - 2nd year					
NOS 120	Linux/UNIX Single User	2	2	0	3
NOS 130	Windows Single User	2	2	0	3
SEC 150	Secure Communications	2	2	0	3
SEC 210	Intrusion Detection	2	2	0	3
SEC 240	Wireless Security	2	2	0	3
OR	COE Co-op Option				3
SEC 289	Security Capstone Project	1	4	0	3
	Total	11	14	0	18
	Grand Total	49	51	0	73

INFORMATION SYSTEMS SECURITY
Network Security Certificate • Cert. Prog. (C2527001)

MAJOR COURSES:		SHC
NET 125	Networking Basics	3
NET 126	Routing Basics	3
SEC 110	Security Concepts	3
SEC 160	Secure Admin I	3
SEC 210	Intrusion Detection	3
SEC 220	Defense-In-Depth	3

Total Credit Hours Required: **18**

Information Systems Security -
Network Security Cert. (C2527001) Suggested Sequence

Fall - 1st year					
SEC 110	Security Concepts	2	2	0	3
NET 125	Networking Basics	1	4	0	3
	Total	3	6	0	6
Spring - 1st year					
NET 126	Routing Basics	1	4	0	3
	Total	1	4	0	3
Fall - 2nd year					
SEC 160	Secure Admin I	2	2	0	3
SEC 220	Defense-In-Depth	2	2	0	3
	Total	4	4	0	6
Spring - 2nd year					
SEC 210	Intrusion Detection	2	2	0	3
	Total	2	2	0	3
	Grand Total	10	16	0	18

INFORMATION SYSTEMS SECURITY
Operating System Security Certificate
Certificate Program (C2527003)

MAJOR COURSES:		SHC
NET 125	Networking Basics	3
NOS 110	Operating System Concepts	3
NOS 120	Linux/UNIX Single User	3
NOS 130	Windows Single User	3
SEC 110	Security Concepts	3
SEC 150	Secure Communications	3

Total Credit Hours Required **18**

Information Systems Security
Operating Security Certificate (C2527003) Suggested Sequence

Fall - 1st year					
SEC 110	Security Concepts	3	0	0	3
NET 125	Networking Basics	1	4	0	3
NOS 110	Operating System Concepts	2	3	0	3
	Total	6	7	0	9
Spring - 1st year					
SEC 150	Secure Communication	2	2	0	3
NOS 120	Linux/UNIX Single User	2	2	0	3
NOS 130	Windows Single User	2	2	0	3
	Total	6	6	0	9
	Grand Total	12	13	0	18

INFORMATION SYSTEMS SECURITY
Wireless Security Certificate
Certificate Program (C2527004)

MAJOR COURSES:		SHC
NET 125	Networking Basics	3
NET 126	Routing Basics	3
NET 175	Wireless Technology	3
SEC 110	Security Concepts	3
SEC 150	Secure Communications	3
SEC 240	Wireless Security	3

Total Credit Hours Required **18**

Information Systems Security
Wireless Security Certificate (C2527004) Suggested Sequence

Fall - 1st year					
SEC 110	Security Concepts	2	2	0	3
NET 125	Networking Basics	1	4	0	3
	Total	3	6	0	6
Spring - 1st year					
NET 126	Routing Basics	1	4	0	3
SEC 150	Secure Communication	2	2	0	3
	Total	3	6	0	6
Fall - 2nd year					
NET 175	Wireless Technology	2	2	0	3
	Total	2	2	0	3
Spring - 2nd year					
SEC 240	Wireless Security	2	2	0	3
	Total	2	2	0	3
	Grand Total	10	16	0	18

MECHANICAL ENGINEERING TECHNOLOGY
A.A.S. Program (A40320)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: four semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Mechanical Engineering Technology curriculum prepares graduates for employment as technicians in the diversified mechanical and manufacturing engineering fields. Mechanical Engineering technicians assist in design, development, testing, process design and improvement, and troubleshooting and repair of engineered systems. Emphasis is placed on the integration of theory and hands-on application of engineering principles. In addition to course work in engineering graphics, engineering fundamentals, materials and manufacturing processes, mathematics, and physics, students will study computer applications, critical thinking, planning and problem solving, and oral and written communications. Graduates of the curriculum will find employment opportunities in the manufacturing or service sectors of engineering technology. Engineering technicians may obtain professional certification by application to organizations such as ASQC, SME, and NICET.

GENERAL EDUCATION COURSES: SHC

English/Communications:
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
	OR		
ENG	112	Argument-Based Research	3
	OR		
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   121   Algebra/Trigonometry I.................................3
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:

CSC	134	C++ Programming	3
DFT	111	Technical Drafting I	2
DFT	111A	Technical Drafting I Lab	1
DFT	151	CAD I	3
DFT	152	CAD II	3
MAT	122	Algebra/Trigonometry II	3
MEC	111	Machine Processes I	3
MEC	180	Engineering Materials	3
MEC	237	Instr and Control Systems	4
MEC	250	Statics & Strength of Mat	5
MEC	265	Fluid Mechanics	3
MEC	270	Machine Design	4
MEC	272	Dynamics	3
PHY	131	Physics-Mechanics	4
PHY	132	Physics-Elec & Magnetism	4
WLD	112	Basic Welding Processes	2

Co-op Option: Qualified students may elect to take up to 4 credit hours of cooperative education in place of MEC 270.

Total Credit Hours Required 65

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Mechanical Engineering Technology • A40320
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CSC 134	C++ Programming	2	3	0	3
DFT 151	CAD I	2	3	0	3
ENG 111	Expository Writing	3	0	0	3
MAT 121	Algebra/Trigonometry I	2	2	0	3
MEC 180	Engineering Materials	2	3	0	3
	Total	11	11	0	15
Spring - 1st year					
DFT 111	Technical Drafting I	1	3	0	2
DFT 111A	Technical Drafting I Lab	0	3	0	1
ENG 114	Prof. Research and Reporting (Preferred)	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
MAT 122	Algebra/Trigonometry II	2	2	0	3
WLD 112	Basic Welding	1	3	0	2
	Humanities/Fine Arts Elective	3	0	0	3
	Total	10	11	0	14
Summer - 1st year					
	Social/Behavioral Science Elective	3	0	0	3
	Total	3	0	0	3
Fall - 2nd year					
DFT 152	CAD II	2	3	0	3
MEC 237	Control Systems	3	2	0	4
MEC 250	Statics & Strength of Mat	4	3	0	5
PHY 131	Physics-Mechanics	3	2	0	4
	Total	12	10	0	16
Spring - 2nd year					
MEC 111	Machine Processes	2	3	0	3
MEC 265	Fluid Mechanics	2	2	0	3
MEC 270	Machine Design	3	3	0	4
MEC 272	Dynamics	2	2	0	3
PHY 132	Physics-Elec & Magnetism	3	2	0	4
	Total	12	12	0	17
	Grand Total	48	44	0	65

Co-op Option: Qualified students may elect to take up to 4 credit hours of cooperative education in place of MEC 270.

MEDICAL OFFICE ADMINISTRATION
Diploma Program (D25310)

This curriculum prepares individuals for employment in medical and other health-care related offices. Course work will include medical terminology; information systems; office management; medical coding, billing and insurance; legal and ethical issues; and formatting and word processing. Students will learn administrative and support functions and develop skills applicable in medical environments. Employment opportunities are available in medical and dental offices, hospitals, insurance companies, laboratories, medical supply companies, and other health-care related organizations.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG 111   Expository Writing 3
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
CIS 110   Introduction to Computers 3
HMT 110   Intro to Healthcare Mgt 3
MED 114   Prof Interaction in HC 1
MED 121   Medical Terminology I 3
MED 122   Medical Terminology II 3
OST 132   Keyboard Skill Building 2
OST 136   Word Processing 3
OST 148   Med Coding Billing & Insu 3
OST 149   Medical Legal Issues 3
OST 164   Text Editing Applications 3
OST 243   Med Office Simulation 3
OST 247   Procedural Coding 2
OST 248   Diagnostic Coding 2
OST 281   Emer Issues in Med Ofc 3

Total Credit Hours Required:..43

DEVELOPMENTAL COURSE REQUIREMENTS
CTS 080   Computing Fundamentals...3
ENG 090   Composition Strategies...3
RED 090   Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Medical Office Administration • D25310
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
HMT 110	Intro to Healthcare Mgt	3	0	0	3
MED 121	Medical Terminology I (1st Eight Wks)	3	0	0	3
MED 122	Medical Terminology II (2nd Eight Wks)	3	0	0	3
OST 132	Keyboard Skill Building	1	2	0	2
OST 136	Word Processing	2	2	0	3
OST 164	Text Editing Applications	3	0	0	3
	Total	15	4	0	17
Spring - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
MED 114	Prof Interac in Heal Care	1	0	0	1
OST 148	Med Coding Billing & Insu (1st 8 Wks)	3	0	0	3
OST 243	Med Office Simulation (2nd 8 Wks)	2	2	0	3
OST 247	Procedure Coding	1	2	0	2
OST 248	Diagnostic Coding	1	2	0	2
OST 281	Emer Issues in Med Ofc	3	0	0	3
	Total	13	8	0	17
Summer - 1st year					
OST 149	Medical Legal Issues	3	0	0	3
ENG 111	Expository Writing	3	0	0	3
	Social/Behavioral Science Elective	3	0	0	3
	Total	9	0	0	9
	Grand Total	37	12	0	43

NETWORKING TECHNOLOGY
A.A.S. Program (A25340)

Courses required to meet graduation requirements in this curriculum are offered during the day and online. Minimum time for completion: Day--five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.

The Networking Technology curriculum prepares individuals for employment supporting network infrastructure environments. Students will learn how to use technologies to provide reliable transmission and delivery of data, voice, image, and video communications in business, industry, and education. Course work includes design, installation, configuration, and management of network infrastructure technologies and network operating systems. Emphasis is placed on the implementation and management of network software and the implementation and management of hardware such as switches and routers. Graduates may find employment in entry-level jobs as local area network managers, network operators, network analysts, and network technicians. Graduates may also be qualified to take certification examinations for various network industry certifications, depending on their local program.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
ENG   114   Prof Research & Reporting...........................3
      OR
ENG   113   Literature-Based Research...........................3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   140   Survey of Mathematics................................3
MAT   140A Survey of Mathematics Lab..........................1
      OR
MAT   161   College Algebra.......................................3
MAT   161A College Algebra Lab..................................1
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
CIS   110   Introduction to Computers............................3
CIS   115   Intro to Prog & Logic.................................3
COE   XXX   Co-op Work Experience 2
CTS   115   Info Sys Business Concept............................3
CTS   120   Hardware/Software Support..........................3
CTS   286   Network Support.......................................3
DBA   110   Database Concepts....................................3
NET   125   Networking Basics.....................................3
NET   126   Routing Basics..3
NET   225   Routing & Switching I.................................3
NET   226   Routing & Switching II................................3
NET   240   Network Design.......................................3
NOS   110   Operating System Concepts...........................3
NOS   120   Linux/UNIX Single User..............................3
NOS   130   Windows Single User..................................3
SEC   110   Security Concepts.....................................3
Server Operating System Electives...6
      Students must select one set of courses from the following:
      NOS   220   Linux/UNIX Admin I 3
      NOS   221   Linux/UNIX Admin II...........................3
         OR
      NOS   230   Windows Admin I...............................3
      NOS   231   Windows Admin II..............................3
Networking Elective 3
      Students must select one course from the following:
      CIS   277   Network Design & Imp.........................3
      NET   175   Wireless Technology 3
      NET   270   Building Scalable Netwks......................3
      NET   271   Remote Access Networks......................3
      NET   272   Multi-Layer Networks.........................3
      NET   273   Internetworking Support.......................3
      NOS   222   Linux/UNIX Admin III.........................3
      NOS   232   Windows Admin III............................3
      NOS   240   Novell Admin I.................................3
      NOS   244   Operating System -- AS/400 3
      SEC   150   Secure Communications........................3
      SEC   160   Secure Admin I................................3

Total Credit Hours Required 72

Con't.

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals...............................3
ENG   090   Composition Strategies..................................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Networking Technology • A25340
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
NOS 110 Operating System Concepts	2	3	0	3
NET 125 Networking Basics	1	4	0	3
SEC 110 Security Concepts	2	2	0	3
CIS 115 Intro to Prog & Logic	2	3	0	3
CIS 110 Introduction to Computers	2	2	0	3
Total	9	14	0	15
Spring - 1st year				
CTS 120 Hardware/Software Support	2	3	0	3
NET 126 Routing Basics	1	4	0	3
NET 240 Network Design	3	0	0	3
NOS 120 Linux/UNIX Single User	2	2	0	3
NOS 130 Windows Single User	2	2	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	13	11	0	18
Summer - 1st year				
ENG 111 Expository Writing	3	0	0	3
MAT 140 Survey of Mathematics	3	0	0	3
MAT 140A Survey of Mathematics Lab	0	2	0	1
OR MAT 161 College Alegbra	3	0	0	3
and MAT 161A College Alegbra Lab	0	2	0	1
Social/Behavioral Science Elective	3	0	0	3
Total	9	2	0	10
Fall - 2nd year				
NET 225 Routing & Switching I (First eight weeks)	1	4	0	3
NET 226 Routing & Switching II (Sec eight wks)	1	4	0	3
DBA 110 Database Concepts	2	3	0	3
NOS 230 Windows Admin I	2	2	0	3
OR NOS 220 Linux/UNIX Admin I	2	2	0	3
Total	6	13	0	12
Spring - 2nd year				
CTS 286 Network Support	2	2	0	3
Networking Elective	3	0	0	3
COE Co-op Work Experience	0	0	20	2
ENG 114 Prof Research & Reporting	3	0	0	3
OR ENG 113 Literature-Based Research	3	0	0	3
CTS 115 Info Sys Business Concept	3	0	0	3
NOS 231 Windows Admin II	2	2	0	3
OR NOS 221 Linux/UNIX Admin II	2	2	0	3
Total	13	4	20	17
Grand Total	50	44	20	72

NETWORKING TECHNOLOGY
CCNA - Cisco Certified Network Associate
Certificate Program (C2534001)

MAJOR COURSES: SHC

NET   125   Networking Basics..3
NET   126   Routing Basics..3
NET   225   Routing & Switching I...3
NET   226   Routing & Switching II 3

Total Credit Hours Required 12

Networking Technology - CCNA Cert. (C2534001) Suggested Seq. <u>Day</u>

Fall - 1st year					
NET 125	Networking Basics		1	4	0	3
		Total	1	4	0	3
Spring - 1st year						
NET 126	Routing Basics		1	4	0	3
		Total	1	4	0	3
Fall - 2nd year						
NET 225	Routing & Switching I (First eight weeks)	1	4	0	3
NET 226	Routing & Switching II (Second eight weeks)	1	4	0	3
		Total	2	8	0	6
		Grand Total	4	16	0	12

Networking Technology - CCNA Cert. (C2534001) Suggested Seq. <u>Night</u>

Fall - 1st year						
NET 125	Networking Basics		1	4	0	3
NET 126	Routing Basics		1	4	0	3
		Total	2	8	0	6
Spring - 1st year						
NET 225	Routing & Switching I (First eight weeks)	1	4	0	3
NET 226	Routing & Switching II (Second eight weeks)	1	4	0	3
		Total	2	8	0	6
		Grand Total	4	16	0	12

NETWORKING TECHNOLOGY
CCNP - Cisco Certified Network Professional
Certificate Program (C2534002)
(Students must have CCNA certificate or equivalent.)

MAJOR COURSES: SHC

NET   270   Building Scalable Networks 3
NET   271   Remote Access Networks 3
NET   272   Multi-Layer Networks 3
NET   273   Internetworking Support....................................3

Total Credit Hours Required 12

Networking Technology - CCNP
Certificate (C2534002) - Suggested Sequence Day

Fall - 1st year						
NET 270	Building Scalable Networks		1	4	0	3
		Total	1	4	0	3
Spring - 1st year						
NET 271	Remote Access Networks		1	4	0	3
		Total	1	4	0	3
Fall - 2nd year						
NET 272	Multi-Layer Networks		1	4	0	3
		Total	1	4	0	3
Spring - 2nd year						
NET 273	Internetworking Support		1	4	0	3
		Total	1	4	0	3
		Grand Total	4	16	0	12

NETWORKING TECHNOLOGY
Operating Systems Certificate Program (C2534004)

MAJOR COURSES: SHC

NOS   110   Operating System Concepts..............................3
NOS   120   Linux/UNIX Single User....................................3
NOS   130   Windows Single User 3
NOS   230   Windows Admin I...3
NOS   240   Novell Admin I..3
NOS   244   Operating System -- AS/400.............................3

Total Credit Hours Required 18

Operating Systems Certificate (C2534004) - Suggested Sequence

Fall - 1st year						
NOS 110	Operating Systems Concepts		2	3	0	3
		Total	2	3	0	3
Spring - 1st year						
NOS 130	Windows Single User		2	2	0	3
NOS 120	Linux/UNIX Single User		2	2	0	3
		Total	4	4	0	6
Fall - 2nd year						
NOS 230	Windows Admin I		2	2	0	3
NOS 240	Novell Admin I		2	2	0	3
		Total	4	4	0	6
Spring - 2nd year						
NOS 244	Operating System - ASS400	2	2	0	3
		Total	2	2	0	3
		Grand Total	12	13	0	18

NETWORKING TECHNOLOGY
RED HAT Certificate Program (C2534005)

MAJOR COURSES: SHC

NOS   110   Operating System Concepts...............................3
NOS   120   Linux/UNIX Single User....................................3
NOS   220   Linux/UNIX Admin I..3
NOS   221   Linux/UNIX Admin II...3
NOS   222   Linux/UNIX Admin III..3

Total Credit Hours Required 15

Red Hat Certificate (C2534005) - Suggested Sequence

Fall - 1st year						
NOS 110	Operating System Concepts		2	3	0	3
		Total	2	3	0	3
Spring - 1st year						
NOS 120	Linux/UNIX Single User		2	2	0	3
		Total	2	2	0	3
Fall - 2nd year						
NOS 220	Linux/UNIX Admin I		2	2	0	3
		Total	2	2	0	3
Spring - 2nd year						
NOS 221	Linux/UNIX Admin II		2	2	0	3
		Total	2	2	0	3
Fall - 3rd year						
NOS 222	Linux/UNIX Admin III		2	2	0	3
		Total	2	2	0	3
		Grand Total	10	11	0	15

NETWORKING TECHNOLOGY
Windows Server Certificate Program (C2534003)

MAJOR COURSES: SHC

NOS   110   Operating System Concepts...............................3
NOS   130   Windows Single User 3
NOS   230   Windows Admin I...3
NOS   231   Windows Admin II..3
NOS   232   Windows Admin III 3

Total Credit Hours Required 15

NetTech - Windows Server Certificate (C2534003) Sug.Seq.

Fall - 1st year						
NOS 110	Operating System Concepts		2	3	0	3
		Total	2	3	0	3
Spring - 1st year						
NOS 130	Windows Single User		2	2	0	3
		Total	2	2	0	3
Fall - 2nd year						
NOS 230	Windows Admin I		2	2	0	3
		Total	2	2	0	3
Spring - 2nd year						
NOS 231	Windows Admin II		2	2	0	3
		Total	2	2	0	3
Fall - 3rd year						
NOS 232	Windows Admin III		2	2	0	3
		Total	2	2	0	3
		Grand Total	10	11	0	15

OFFICE ADMINISTRATION
A.A.S. Program (A25370)

Courses required to meet graduation requirements in this curriculum are offered during the day and online. The Associate in Applied Science Degree is awarded graduates of this curriculum. A certificate is awarded graduates of the Office Administration certificate option.

The Office Administration curriculum prepares individuals for positions in administrative support careers. It equips office professionals to respond to the demands of a dynamic computerized workplace. Students will complete courses designed to develop proficiency in the use of integrated software, oral and written communication, analysis and coordination of office duties and systems, and other support topics. Emphasis is placed on non-technical as well as technical skills. Graduates should qualify for employment in a variety of positions in business, government, and industry. Job classifications range from entry-level to supervisor to middle management.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG	111	Expository Writing	3
ENG	113	Literature-Based Research	3
	OR		
ENG	114	Prof Research & Reporting	3

Natural Sciences/Mathematics:
MAT	115	Mathematical Models	3
	OR		
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1

Humanities/Fine Arts:
Elective			3

Social/Behavioral Sciences:
Elective			3

MAJOR COURSES:
ACC	120	Prin of Financial Acct	4
BUS	115	Business Law I	3
BUS	260	Business Communication	3
CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3
OST	132	Keyboard Skill Building	2
OST	136	Word Processing	3
OST	137	Office Software Applicat	3
OST	153	Office Finance Solutions	2
OST	164	Text Editing Applications	3
OST	165	Adv Text Editing Apps	3
OST	181	Intro to Office Systems	3
OST	184	Records Management	3
OST	284	Emerging Technologies	2
OST	286	Professional Development	3
OST	289	Administrative Office Mgt	3
WEB	110	Internet/Web Fundamentals	3
	OR		
COE	XXX	Co-op Work Experience	3

Co-op Option: Qualified students may elect to take up to 3 credit hours of cooperative education in place of WEB 110.

Total Credit Hours Required 64-65

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT		DMA 010, DMA 020, DMA 030, DMA 040, DMA 050	5
OST	080	Keyboarding Literacy	2
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Office Administration • A25370
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
ENG 111	Expository Writing	3	0	0	3
OST 132	Keyboard - Skill Building	1	2	0	2
OST 164	Text Editing Applications	3	0	0	3
OST 136	Word Processing	2	2	0	3
	Total	11	6	0	14
Spring - 1st year					
OST 184	Records Management	2	2	0	3
CTS 130	Spreadsheet Software	2	2	0	3
ENG 113	Literature - Based Research	3	0	0	3
OR ENG 114	Prof Research & Reporting	3	0	0	3
OST 284	Emerging Technologies	1	2	0	2
OST 137	Office Software Applicat	2	2	0	3
OST 181	Intro to Office Systems	2	2	0	3
	Total	12	10	0	17
Fall - 2nd year					
ACC 120	Princ of Financial Acct	3	2	0	4
BUS 260	Business Communication	3	0	0	3
MAT 115	Mathematical Models	2	2	0	3
OR MAT 161	College Algebra	3	0	0	3
and MAT 161A	College Albegra Lab	0	2	0	1
OST 165	Adv Text Editing Apps	2	2	0	3
OST 286	Professional Development	3	0	0	3
	Total	13/14	6	0	16/17
Spring - 2nd year					
OST 289	Administrative Office Mgt	2	2	0	3
WEB 110	Internet/Web Fundamentals	2	2	0	3
OR	Co-op Work Experience	0	0	30	3
OST 153	Office Finance Solutions	1	2	0	2
BUS 115	Business Law I	3	0	0	3
	Humanities/Fine Art Elective	3	0	0	3
	Social/Behavioral Science Elective	3	0	0	3
	Total	14	6	0/30	17
	Grand Total	50/51	28	0/30	64/65

OFFICE ADMINISTRATION
Diploma Program (D25370)

GENERAL EDUCATION COURSES: SHC
English/Communications:
ENG 111 Expository Writing 3
ENG 113 Literature - Based Research 3
   OR ENG 114 Prof Research & Reporting 3
MAJOR COURSES:
BUS 115 Business Law I 3
CIS 110 Introduction to Computers 3
CTS 130 Spreadsheet Software 3
OST 132 Keyboard Skill Building 2
OST 136 Word Processing 3
OST 137 Office Software Applicat 3
OST 153 Office Finance Solutions 2
OST 164 Text Editing Applications 3
OST 181 Intro to Office Systems 3
OST 184 Records Management 3
WEB 110 Internet/Web Fundamentals 3

Total Credit Hours Required: 37

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals 3
ENG 070 Basic Language Skills 3
OST 080 Keyboarding Literacy..3
RED 080 Intro to College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Office Administration - Diploma (D25370)
Suggested Sequence

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
OST 132	Keyboarding Skill Building	1	2	0	2
OST 136	Word Processing	2	2	0	3
OST 164	Text Editing Applications	3	0	0	3
ENG 111	Expository Writing	3	0	0	3
	Total	11	6	0	14
Spring - 1st year					
OST 181	Intro to Office Systems	2	2	0	3
OST 184	Records Management	2	2	0	3
OST 137	Office Software Applicat	2	2	0	3
OST 153	Office Finance Solutions	1	2	0	2
CTS 130	Spreadsheet Software	2	2	0	3
WEB 110	Internet/Web Fundamentals	2	2	0	3
	Total	11	12	0	17
Summer - 1st year					
ENG 113	Literature - Based Research	3	0	0	3
	OR ENG 114 Prof Research & Reporting	3	0	0	3
BUS 115	Business Law I	3	0	0	3
	Total	6	0	0	6
	Grand Total	28	18	0	37

OFFICE ADMINISTRATION
Certificate Program (C25370)

MAJOR COURSES: SHC
CIS 110 Introduction to Computers 3
OST 132 Keyboard Skill Building 2
OST 136 Word Processing..3
OST 164 Text Editing Applications..................................3
OST 181 Intro to Office Systems 3
OST 184 Records Management 3

Total Credit Hours Required:..**17**

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals 3
ENG 070 Basic Language Skills 3
OST 080 Keyboarding Literacy...3
RED 080 Intro to College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Office Administration - Certificate (C25370)
Suggested Sequence

Fall - 1st year					
CIS 110	Introduction to Computers	2	2	0	3
OST 132	Keyboarding Skill Building	1	2	0	2
OST 136	Word Processing	2	2	0	3
OST 164	Text Editing Applications	3	0	0	3
	Total	8	6	0	11
Spring - 1st year					
OST 181	Intro to Office Systems	2	2	0	3
OST 184	Records Management	2	2	0	3
	Total	4	4	0	6
	Grand Total	12	10	0	17

OFFICE ADMINISTRATION
Microsoft Office Specialist Certificate (MOS)
Certificate Program (C2537001)

MAJOR COURSES: SHC
CIS 110 Introduction to Computers..3
CTS 130 Spreadsheet 3
OST 136 Word Processing 3
OST 137 Office Software Applicat 3

Total Credit Hours Required:...**12**

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals 3
RED 080 Intro to College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Office Administration - Microsoft Office Specialist -
Certificate (C2537001) - Suggested Sequence

Fall - 1st year					
CIS 110	Introduction to Computers	2	3	0	3
OST 136	Word Processing	2	2	0	3
	Total	4	5	0	6
Spring - 1st year					
CTS 130	Spreadsheet Software	2	2	0	3
OST 137	Office Software Applicat	2	2	0	3
	Total	4	4	0	6
	Grand Total	8	9	0	12

PHOTOGRAPHIC TECHNOLOGY
A.A.S. Program (A30280)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. The Photographic Technology curriculum offers training in photographic techniques and their application in professional photographic disciplines. Where offered, students will receive comprehensive course work in four areas of concentration: Biomedical Photography, Photojournalism, Commercial Photography and Portrait Studio Management. Special emphasis is placed on developing skills in the following areas: fundamentals of camera systems, lighting, photographic process, digital imaging, design and business practices. Graduates should qualify for entry level jobs in the diverse photographic industry. Employment opportunities exist in the following areas: commercial photography, photojournalism, biomedical photography, portrait photography, equipment sales, photographic laboratories, and imaging technologies, depending upon courses offered and completed.

GENERAL EDUCATION COURSES: SHC
English/Communications:
ENG   111   Expository Writing 3
ENG   113   Literature-Based Research................................3
     OR
ENG   114   Prof Research & Reporting...............................3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
     OR
MAT   140   Survey of Mathematics 3
MAT   140A   Survey of Mathematics Lab............................1
     OR
A higher Math 3/4

Social/Behavioral Sciences:
Elective 3
MAJOR COURSES:
PHO   110   Fund of Photography 5
PHO   113   History of Photography 3
PHO   115   Basic Studio Lighting 4
PHO   120   Intermediate Photography...............................4
PHO   139   Intro to Digital Imagining 2
PHO   150   Portfolio Development I 4
PHO   216   Documentary Photography 4
PHO   217   Photojournalism I 4
PHO   219   Digital Applications 2
PHO   220   Business of Photography 3
PHO   224   Multimedia Productions 3
PHO   226   Portraiture 4
PHO   235   Commercial Photography 4
PHO   250   Portfolio Development II.................................4

PHO Program Electives 1-3
    Students are required to take a minimum of 1 SHC from the following:
    BUS 110   Introduction to Business 3
    BUS 125   Personal Finance 3
    BUS 137   Principles of Management 3
    BUS 139   Entrepreneurship I....................................3
    CIS 110   Introduction to Computers 3
    COE XXX   Co-op Work Experience..........................1-3

OTHER REQUIRED COURSES:
ACA   111   College Student Success.............................1

Total Credit Hours Required 67-70

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals.............................3
ENG   090   Composition Strategies................................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading............................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Photographic Technology • A30280
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
ACA 111 College Student Success	1	0	0	1
ENG 111 Expository Writing	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
OR MAT 140 Survey of Mathematics	3	0	0	3
and MAT 140A Survey of Mathematics Lab	0	2	0	1
OR a higher Math				
PHO 110 Fundamentals of Photography	3	6	0	5
PHO 139 Intro to Digital Imaging	1	3	0	2
Total	10/11	11	0	14/15
Spring - 1st year				
PHO 115 Basic Studio Lighting	2	6	0	4
PHO 120 Intermediate Photography	2	4	0	4
PHO 219 Digital Applications	1	3	0	2
PHO 220 Business of Photography	3	0	0	3
PHO 224 Multimedia Productions	2	3	0	3
Total	10	16	0	16
Summer - 1st year				
ENG 113 Literature - Based Research	3	0	0	3
OR ENG 114 Prof Research and Reporting	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Social/Behavioral Science Elective	3	0	0	3
Total	9	0	0	9
Fall - 2nd year				
PHO 150 Portfolio Development I	3	3	0	4
PHO 217 Photojournalism I	1	6	0	4
PHO 226 Portraiture	3	3	0	4
PHO 235 Commercial Photography	2	4	0	4
Total	9	16	0	16
Spring - 2nd year				
PHO 113 History of Photography	3	0	0	3
PHO 216 Documentary Photography	2	4	0	4
PHO 250 Portfolio Development II	2	4	0	4
Program Elective				1/3
Total	7	8	0	12/14
Grand Total	45/46	51	0	67/70

Photographic Technology Certificate • (C30280)

MAJOR COURSES:.. SHC
PHO   110   Fund of Photography 5
PHO   115   Basic Studio Lighting 4
PHO   139   Intro to Digital Imagining................................2
PHO   219   Digital Applications...2
PHO   224   Multimedia Productions..................................3

Total Credit Hours Required 16

Photographic Technology Certificate • (C30280)
Suggested Program Sequence Evening

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
PHO 110 Fund of Photography	3	6	0	5
PHO 139 Intro to Digital Imaging	1	3	0	2
Total	4	9	0	7
Spring - 1st year				
PHO 219 Digital Applications	1	3	0	2
Total	1	3	0	2
Fall - 2nd year				
PHO 115 Basic Studio Lighting	2	6	0	4
Total	2	6	0	4
Spring - 2nd year				
PHO 224 Multimedia Productions	2	3	0	3
Total	2	3	0	3
Grand Total	9	21	0	16

POLYSOMNOGRAPHY
A.A.S. Program (A45670)

Courses required to meet graduation requirements in this curriculum are offered during day hours only with clinicals in the evenings. Minimum time for completion: four semesters full-time attendance. The Associate of Applied Science degree is awarded graduates of this curriculum.

The Polysomnography curriculum prepares individuals, working in conjunction with a physician, to perform and interpret sleep studies and to provide comprehensive clinical evaluations that are required for the diagnosis of sleep related disorders. Students will acquire the knowledge and skills necessary to perform sleep studies, including recording and interpreting events observed during sleep. Treatment of sleep related disorders and patient education focused on healthy sleep habits will also be discussed. Graduates of accredited programs may be eligible to apply to take the examination offered by the Board of Registered Polysomnographic Technologists. Employment opportunities may be found in hospitals and freestanding sleep centers.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG	111	Expository Writing	3
ENG	114	Prof Research & Reporting	3
	OR		
ENG	112	Argument-Based Research	3
	OR		
ENG	113	Literature-Based Research	3

Humanities/Fine Arts:
Elective		3

Natural Sciences/Mathematics:
MAT	115	Mathematical Models	3

Social/Behavioral Sciences:
Elective		3

MAJOR COURSES:
BIO	163	Basic Anat & Physiology	5
CIS	110	Introduction to Computers	3
ELC	111	Intro to Electricity	3
MED	118	Medical Law and Ethics	2
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3
PSG	110	Intro to Polysomnography	4
PSG	111	Neuro/Cardiopulmonary A&P	4
PSG	112	PSG Fundamentals	3
PSG	210	Polysomnography I	7
PSG	211	Polysomnography II	7
PSG	212	Infant/Pediatric PSG	4
PSG	213	Case Study/Exam Review	1
PSG	214	PSG Clinical Apps I	1

OTHER REQUIRED COURSES:
ACA	111	College Student Success	1

Total Credit Hours Required 66

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Polysomnography • A45670
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ACA 111	College Student Success	1	0	0	1
ENG 111	Expository Writing	3	0	0	3
MED 121	Medical Terminology I	3	0	0	3
MAT 115	Mathematical Models	2	2	0	3
PSG 110	Intro to Polysomnography	3	2	0	4
	Total	12	4	0	14
Spring - 1st year					
MED 122	Medical Terminology II	3	0	0	3
CIS 110	Intro to Computers	2	2	0	3
ELC 111	Intro to Electricity	2	2	0	3
PSG 111	Neuro/CP A&P	4	0	0	4
PSG 112	Fundamentals	3	0	0	3
	Total	14	4	0	16
Summer - 1st year					
MED 118	Medical Law and Ethics	2	0	0	2
ENG 114	Prof Research & Reporting	3	0	0	3
OR	ENG 112 Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
	Humanities/Fine Arts Elective	3	0	0	3
	Total	8	0	0	8
Fall - 2nd year					
PSG 210	Polysomnography I	3	2	9	7
PSG 214	PSG Clinical Apps I	0	2	0	1
	Social Behavioral/Science Elective	3	0	0	3
	Total	6	4	9	11
Spring - 2nd year					
PSG 211	Polysomnography II	2	6	9	7
PSG 212	Infant/Pediatric PSG	3	2	0	4
PSG 213	Exam Review/Case Studies	0	3	0	1
	Total	5	11	9	12
	Grand Total	45	23	18	61

Note: Students must complete BIO 163, Basic Anat & Physiology 5 credit hours, prior to admission into the program.

POLYSOMNOGRAPHY
Certificate Program (C45650)

Courses required to meet graduation requirements in this curriculum are offered during day hours, clinicals are offered in the evening hours. Minimum time for completion: three semesters part-time attendance. A certificate is awarded graduates of this curriculum.

MAJOR COURSES: **SHC**
*PSG	189	Polysomnog Transition	3
PSG	210	Polysomnography I	7
PSG	211	Polysomnography II	7

*Credit for course may be earned by successfully completing the Polysomnography Entrance Test.

Total Credit Hours Required 17

Polysomnography Certificate • C45650   Suggested Seq.

		Class	Lab	Clin	Credit
Summer - 1st year					
*PSG 189	Polysomnog Transition	1	3	3	3
	Total	1	3	3	3
Fall - 1st year					
PSG 210	Polysomnography I	3	2	9	7
	Total	3	2	9	7
Spring - 1st year					
PSG 211	Polysomnography II	2	6	9	7
	Total	2	6	9	7
	Grand Total	6	11	21	17

RADIOGRAPHY
A.A.S. Program (A45700)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum.

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.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
English Elective 3
> Students are required to take one (1) course from the following:
> ENG   112   Argument-Based Research.........................3
> ENG   113   Literature-Based Research.........................3
> ENG   114   Prof Research & Reporting 3

Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
BIO   168   Anatomy and Physiology I 4
BIO   169   Anatomy and Physiology II..................4
Social/Behavioral Sciences:
PSY   150   General Psychology..................................3

MAJOR COURSES:
RAD   110   Rad Intro & Patient Care 3
RAD   111   Rad Procedures I...................................
RAD   112   RAD Procedures II 4
RAD   121   Radiographic Imaging I 3
RAD   122   Radiographic Imaging II.........................2
RAD   131   Radiographic Physics I 2
RAD   151   RAD Clinical Ed I 2
RAD   161   Rad Clinical Ed II 5
RAD   171   Rad Clinical Ed III................................4
RAD   211   Rad Procedures III 3
RAD   231   Radiographic Physics II.........................2
RAD   241   Radiobiology/Protection.........................2
RAD   245   Image Analysis 2
RAD   251   Rad Clinical Ed IV................................7
RAD   261   Rad Clinical Ed V 7
RAD   271   Radiography Capstone...........................1

Total Credit Hours Required 73

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG   090   Composition Strategies...........................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040 4
RED   090   Improved College Reading......................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Radiography Program • A45700
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
BIO 168 Anat. & Physiology	3	3	0	4
ENG 111 Expository Writing	3	0	0	3
PSY 150 General Psychology	3	0	0	3
Total	9	3	6	10
Spring - 1st year				
BIO 169 Anat. & Physiology II	3	3	0	4
ENG 112 Argument Based Research (Preferred)	3	0	0	3
OR ENG 113 Literature Based Research	3	0	0	3
OR ENG 114 Prof Research & Reporting	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	9	3	0	10
Fall - 2nd year				
RAD 110 Rad Intro & Patient Care	2	3	0	3
RAD 111 Rad Procedures I	3	3	0	4
RAD 151 RAD Clinical Ed. I	0	0	6	2
Total	5	6	6	9
Spring - 2nd year				
RAD 112 RAD Procedures II	3	3	0	4
RAD 121 Radiographic Imaging I	2	3	0	3
RAD 131 Radiographic Physics I	1	3	0	2
RAD 161 Rad Clinical Ed II	0	0	15	5
Total	6	9	15	14
Summer - 2nd year				
RAD 122 Radiographic Imaging II	1	3	0	2
RAD 171 Rad Clinical Ed III	0	0	12	4
Total	1	3	12	6
Fall - 3rd year				
RAD 211 Rad Procedures III	2	3	0	3
RAD 231 Radiographic Physics II	1	3	0	2
RAD 251 Rad Clinical Ed IV	0	0	21	7
Total	3	6	21	12
Spring - 3rd year				
RAD 241 Radiobiology/Protection	2	0	0	2
RAD 245 Image Analysis	1	3	0	2
RAD 261 Rad Clinical Ed V	0	0	21	7
RAD 271 Radiography Capstone	0	3	0	1
Total	3	6	21	12
Grand Total	36	36	75	73

Note: Students must complete BIO 168, BIO 169, ENG 111, ENG 112 or ENG 113 or ENG 114, MAT 140 or higher, PSY 150, and a Humanities/Fine Arts elective, prior to the program application deadline and prior to admission to the program. Students must also be accepted into the Radiography program prior to taking RAD courses.

REAL ESTATE

Real Estate courses offered can be taken as an elective for Business Administration and General Occupational Technology, or for the North Carolina Real Estate Sales and Broker examinations.

Course requirements for the North Carolina Real Estate Sales Examination:

RLS 112 Broker Prelicensing	5 0 0	5
RLS 113 Real Estate Mathematics	2 0 0	2

For additional information on examination requirements, please contact the North Carolina Real Estate Office.

RESPIRATORY THERAPY
A.A.S. Program (A45720)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: five semesters full-time attendance. The Associate of Applied Science Degree is awarded graduates of this curriculum.

The Respiratory Therapy curriculum prepares individuals to function as respiratory therapists. In these roles, individuals perform diagnostic testing, treatments, and management of patients with heart and lung diseases. Students will master skills in patient assessment and treatment of cardiopulmonary diseases. These skills include life support, monitoring, drug administration, and treatment of patients of all ages in a variety of settings. Graduates of accredited programs may be eligible to take entry-level examinations from the National Board of Respiratory Care. Therapy graduates may also take the Advanced Practitioner examination. Graduates may be employed in hospitals, clinics, nursing homes, education, industry, and home care.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
ENG   112   Argument-Based Researach..................3
    OR
ENG   113   Literature-Based Research......................3
    OR
ENG   114   Prof Research & Reporting.....................3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
BIO   163   Basic Anat & Physiology.........................5
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:

BIO   175   General Microbiology...............................3
RCP   110   Intro to Respiratory Care 4
RCP   111   Therapeutics/Diagnostics.........................5
RCP   113   RCP Pharmacology...................................2
RCP   114   C-P Anatomy & Physiology 3
RCP   115   C-P Pathophysiology 2
RCP   122   Special Practice Lab 1
RCP   123   Special Practice Lab 1
RCP   145   RCP Clinical Practice II..........................5
RCP   152   RCP Clinical Practice III.........................2
RCP   210   Critical Care Concepts.............................4
RCP   211   Adv Monitoring/Procedures 4
RCP   214   Neonatal/Ped's RC...................................2
RCP   215   Career Prep-Adv Level 1
RCP   236   RCP Clinical Practice IV.........................6
RCP   247   RCP Clinical Practice V...........................7

Total Credit Hours Required 69

DEVELOPMENTAL COURSE REQUIREMENTS*

ENG   090   Composition Strategies..............................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040 4
RED   090   Improved College Reading.........................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Respiratory Therapy • A45720
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
RCP 110	Intro to Resp. Care	3	3	0	4
RCP 113	RCP Pharmacology	2	0	0	2
RCP 122	Special Practice Lab	0	2	0	1
RCP 114	C-P Anatomy & Physiology	3	0	0	3
BIO 163	Basic Anatomy & Physiology	4	2	0	5
ENG 111	Expository Writing	3	0	0	3
	Total	15	7	0	18
Spring - 1st year					
RCP 111	Therapeutics/Diagnostics	4	3	0	5
RCP 145	Clinical Practice II	0	0	15	5
RCP 115	C-P Pathophysiology	2	0	0	2
BIO 175	General Microbiology	2	2	0	3
ENG 112	Argument-Based Research	3	0	0	3
OR	ENG 113 Literature-Based Research	3	0	0	3
OR	ENG 114 Professional Writing	3	0	0	3
(Students are recommended to take ENG 114)					
	Total	11	5	15	18
Summer - 1st year					
RCP 152	Clinical Practice III	0	0	6	2
RCP 123	Special Practice Lab	0	3	0	1
	Total	0	3	6	3
Fall - 2nd year					
RCP 210	Critical Care Concepts	3	3	0	4
RCP 236	Clinical Practice IV	0	0	18	6
RCP 214	Neo/Peds Resp. Care	1	3	0	2
	Humanities/Fine Arts Elective	3	0	0	3
	Total	7	6	18	15
Spring - 2nd year					
RCP 211	Advanced Monitoring/Proced.	3	3	0	4
RCP 247	Clinical Practice V	0	0	21	7
RCP 215	Career Prep - Adv. Level	0	3	0	1
	Social/Behavioral Science Elective	3	0	0	3
	Total	6	6	21	15
.	Grand Total	39	27	60	69

Note: Students must complete college level chemistry, 4 credit hours, prior to admission into the program. CHM 100 or greater.

SURGICAL TECHNOLOGY
Diploma Program (D45740)

Courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: three semesters full-time attendance. The Diploma is awarded graduates of the surgical technology curriculum. The Surgical Technology curriculum prepares individuals to assist in the care of the surgical patient in the operating room and to function as a member of the surgical team. Students will apply theoretical knowledge to the care of patients undergoing surgery and develop skills necessary to prepare supplies, equipment, and instruments; maintain aseptic conditions; prepare patients for surgery; and assist surgeons during operations. Employment opportunities include labor/delivery/emergency departments, inpatient/outpatient surgery centers, dialysis units/facilities, physicians' offices, and central processing units. Students of Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredited programs are required to take the national certification exam administered by the National Board on Certification in Surgical Technology and Surgical Assisting (NBSTSA) within a four-week period prior to or after graduation.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
Social/Behavioral Sciences:
PSY   150   General Psychology..3

MAJOR COURSES:
BIO   163   Basic Anat & Physiology...............................5
BIO   175   General Microbiology....................................3
SUR   110   Intro to Surg Tech..3
SUR   111   Periop Patient Care 7
SUR   122   Surgical Procedures I....................................6
SUR   123   SUR Clinical Practice I.................................7
SUR   134   Surgical Procedures II..................................5
SUR   135   SUR Clinical Practice II...............................4
SUR   137   Prof Success Prep 1

OTHER REQUIRED COURSES:
ACA   111   College Student Success 1

Total Credit Hours Required 48

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS   080   Computing Fundamentals.............................3
ENG   090   Composition Strategies..................................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040 4
RED   090   Improved College Reading............................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Surgical Technology • (D45740)
Suggested Program Sequence Day

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
ENG 111	Expository Writing	3	0	0	3
ACA 111	College Student Success	1	0	0	1
BIO 163	Basic Anatomy & Physiology	4	2	0	5
SUR 110	Intro to Surg Tech	3	0	0	3
SUR 111	Periop Patient Care	5	6	0	7
	Total	16	8	0	19
Spring - 1st year					
BIO 175	General Microbiology	2	2	0	3
PSY 150	General Psychology	3	0	0	3
SUR 122	Surgical Procedures I	5	3	0	6
SUR 123	SUR Clinical Practice I	0	0	21	7
	Total	10	5	21	19
Summer - 1st year					
SUR 135	SUR Clinical Practice II	0	0	12	4
SUR 134	Surgical Procedures II	5	0	0	5
SUR 137	Prof Success Prep	1	0	0	1
	Total	6	0	12	10
	Grand Total	32	13	33	48

TURFGRASS MANAGEMENT TECHNOLOGY
A.A.S. Program (A15420)

Most courses required to meet graduation requirements in this curriculum are offered during day hours only. Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. CVCC has an 2 + 2 Articulation Agreement with N.C. Agricultural and Technological State University in Horticulture. CVCC has an 2+2 Online Articulation Agreement with Pennsylvania State University for the B.S. Degree in Turfgrass Management. These curricula are designed to prepare individuals for various careers in horticulture. Classroom instruction and practical laboratory applications of horticultural principles and practices are included in the program of study. Course work includes plant identification, pest management, plant science and soil science. Also included are courses in sustainable plant production and management, landscaping, and the operation of horticulture businesses. Graduates should qualify for employment in a variety of positions associated with nurseries, garden centers, greenhouses, landscape operations, governmental agencies/parks, golf courses, sports complexes, highway vegetation, turf maintenance companies, and private and public gardens. Graduates should also be prepared to take the North Carolina Pesticide Applicator's Examination and/or the North Carolina Certified Plant Professional Examination. A program that focuses on turfgrasses and related groundcover plants and prepares individuals to development ornamental or recreational grasses and related products; plant, transplant, and manage grassed areas; and to produce and store turf used for transplantation. Potential course work includes instruction in applicable plant sciences, genetics of grasses, turf science, use analysis, turf management, and related economics.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG   111   Expository Writing 3
ENG   114   Prof Research & Reporting..............................3
      OR
ENG   112   Argument-Based Research 3
      OR
ENG   113   Literature-Based Research................................3
Humanities/Fine Arts:
Elective 3
Natural Sciences/Mathematics:
MAT   115   Mathematical Models 3
Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
COE   XXX   Co-op Work Experience.................................5
HOR   162   Applied Plant Science...................................3
HOR   166   Soils & Fertilizers..3
TRF   110   Intro Turfgrass Cult & ID 4
TRF   120   Turfgrass Irrigat & Design............................4
TRF   125   Turfgrass Computer App 2
TRF   130   Native Flora ID...2
TRF   140   Turfgrass Mgmt Safety.................................3
TRF   150   Landscape Drafting......................................2
TRF   151   Intro Landscape Design................................3
TRF   152   Landscape Maintenance 3
TRF   210   Turfgrass Eqmt Mgmt..................................3
TRF   220   Turfgrass Calculations 2
TRF   230   Turfgrass Mgmt Apps 2
TRF   240   Turfgrass Pest Control 3
TRF   250   Golf/Sport Field Const..................................4
TRF   260   Adv Turfgrass Mgmt 4

OTHER REQUIRED COURSES:
SPA   120   Spanish for the Workplace.............................3

Total Credit Hours Required 70

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG   090   Composition Strategies..................................3
MAT   DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED   090   Improved College Reading............................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Turfgrass Management Technology • A15420
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
ENG 111 Expository Writing	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
TRF 110 Intro to Turfgrass Cul & ID	3	2	0	4
HOR 166 Soils & Fertilizers	2	2	0	3
TRF 150 Landscape Drafting	1	3	0	2
HOR 162 Applied Plant Science	2	2	0	3
Total	13	11	0	18
Spring - 1st year				
TRF 220 Turfgrass Calculations	2	0	0	2
TRF 210 Turfgrass Equipment Mgmt	1	4	0	3
TRF 120 Turfgrass Irrigat & Design	2	4	0	4
ENG 114 Prof Research & Reporting (Preferred)	3	0	0	3
OR ENG 112 Argument-Based Research	3	0	0	3
OR ENG 113 Literature-Based Research	3	0	0	3
TRF 151 Intro Landscape Design	2	2	0	3
Total	10	10	0	15
Summer - 1st year				
COE XXX Co-op Work Experience	0	0	20	2
Total	0	0	20	2
Fall - 2nd year				
TRF 240 Turfgrass Pest Control	2	2	0	3
TRF 140 Turfgrass Mgmt Safety	2	2	0	3
TRF 125 Turfgrass Computer App	1	3	0	2
TRF 130 Native Flora ID	1	3	0	2
TRF 152 Landscape Maintenance	2	2	0	3
COE XXX Co-op Work Experience	0	0	10	1
Humanities/Fine Arts Elective	3	0	0	3
Total	11	12	0	17
Spring - 2nd year				
TRF 260 Adv Turfgrass Mgmt	3	2	0	4
TRF 230 Turfgrass Mgmt Apps	1	2	0	2
TRF 250 Golf/Sport Field Const	2	4	0	4
COE XXX Co-op Work Experience	0	0	20	2
SPA 120 Spanish for the Workplace	3	0	0	3
Social/Behavioral Science Elective	3	0	0	3
Total	12	8	0	18
Grand Total	46	41	50	70

TURFGRASS MANAGEMENT TECHNOLOGY
Diploma Program (D15420)

GENERAL EDUCATION COURSES: **SHC**
ENG 111 Expository Writing 3
MAT 115 Mathematical Models 3

MAJOR COURSES:
COE 113 Co-op Work Experience I 3
COE XXX Co-op Work Experience 2
HOR 166 Soils & Fertilizers 3
TRF 110 Intro Turfgrass Cult & ID 4
TRF 120 Turfgrass Irrigat & Design 4
TRF 130 Native Flora ID 2
TRF 140 Turfgrass Mgmt Safety 3
TRF 151 Intro Landscape Design 3
TRF 210 Turfgrass Eqmt Mgmt 3
TRF 220 Turfgrass Calculations 2
TRF 240 Turfgrass Pest Control 3
TRF 250 Golf/Sport Field Const 4

Total Credit Hours Required 39

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG 090 Composition Strategies..3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED 090 Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Fall - 1st year	Class	Lab	Clin	Credit
ENG 111 Expository Writing	3	0	0	3
MAT 115 Mathematical Models	2	2	0	3
HOR 166 Soils & Fertilizers	2	2	0	3
TRF 110 Intro to Turfgrass Cul & ID	3	2	0	4
TRF 140 Turfgrass Mgmt Safety	2	2	0	3
TRF 240 Turfgrass Pest Control	2	2	0	3
Total	12	8	0	19
Spring - 1st year				
TRF 120 Turfgrass Irrigat & Design	2	4	0	4
TRF 151 Intro Landscape Design	2	2	0	3
TRF 210 Turfgrass Equipment Mgmt	1	4	0	3
TRF 220 Turfgrass Calculations	2	0	0	2
TRF 250 Golf/Sport Field Const	2	4	0	4
COE XXX Co-op Work Experience I	0	0	0	1
Total	9	14	0	17
Summer - 1st year				
COE 113 Co-op Work Experience I	0	0	30	3
Total	0	0	30	3
Grand Total	21	22	30	39

TURFGRASS MANAGEMENT TECHNOLOGY
Certificate Program (C15420)

MAJOR COURSES: **SHC**
TRF 110 Intro Turfgrass Cult & ID 4
TRF 120 Turfgrass Irrigat & Design 4
TRF 140 Turfgrass Mgmt Safety 3
TRF 220 Turfgrass Calculations 2
TRF 240 Turfgrass Pest Control 3

Total Credit Hours Required 16

DEVELOPMENTAL COURSE REQUIREMENTS*
ENG 090 Composition Strategies..3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED 090 Improved College Reading 4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Fall - 1st year	Class	Lab	Clin	Credit
TRF 110 Intro to Turfgrass Cul & ID	3	2	0	4
TRF 140 Turfgrass Mgmt Safety	2	2	0	3
TRF 240 Turfgrass Pest Control	2	2	0	3
Total	7	6	0	10
Spring - 1st year				
TRF 120 Turfgrass Irrigat & Design	2	4	0	4
TRF 220 Turfgrass Calculations	2	0	0	2
Total	4	4	0	6
Grand Total	11	10	0	16

WEB TECHNOLOGIES
A.A.S. Program (A25290)

Courses required to meet graduation requirements in this curriculum are offered during the day and online. Minimum time for completion: Day--five semesters full-time attendance. The Associate in Applied Science Degree is awarded graduates of this curriculum. The Web Technologies curriculum prepares graduates for careers in the information technology arena using computers and distributed computing to disseminate and collect information via the web. Course work in this program covers the terminology and use of computers, network devices, networks, servers, databases, applications, programming languages, as well as web applications, site development and design. Studies will provide opportunity for students to learn related industry standards. Graduates should qualify for career opportunities as designers, administrators, or developers in the areas of web applications, websites, web services, and related areas of distributed computing.

GENERAL EDUCATION COURSES: **SHC**

English/Communications:
ENG 111 Expository Writing 3
ENG 114 Prof Research & Reporting.........................3
       OR
ENG 113 Literature-Based Research..........................3

Humanities/Fine Arts:
Elective 3

Natural Sciences/Mathematics:
MAT 140 Survey of Mathematics...............................3
MAT 140A Survey of Mathematics Lab.......................1

Social/Behavioral Sciences:
Elective 3

MAJOR COURSES:
CIS 110 Introduction to Computers 3
CIS 115 Intro to Prog & Logic 3
COE XXX Co-op Work Experience................................2
CTS 115 Info Sys Business Concept 3
DBA 110 Database Concepts..3
NET 125 Networking Basics..3
NOS 110 Operating System Concepts...........................3
SEC 110 Security Concepts...3
WEB 110 Internet/Web Fundamentals............................3
WEB 115 Web Markup and Scripting.............................3
WEB 120 Intro Internet Multimedia 3
WEB 140 Web Development Tools..................................3
WEB 210 Web Design..3
WEB 230 Implementing Web Serv..................................3
WEB 250 Database Driven Websites 3
WEB 289 Internet Technologies Project 3
Program/WEB Industry Elective 3

    Students are required to take one (1) course from the following:
    BUS 230 Small Business Management.......................3
    CSC 151 JAVA Programming 3
    MKT 120 Principles of Marketing..............................3
    MKT 223 Customer Service...3
    SGD 111 Introduction to SGD 3
    SGD 112 SGD Design..3
    SGD 114 3D Modeling...3
    WEB 180 Active Server Pages.....................................3
    WEB 186 XML Technology...3
    WEB 260 E-Commerce Infrastructure 3

OTHER REQUIRED COURSES:
ACA 111 College Student Success.................................1
    Students are required to take one (1) course from the following:
FVP 220 Editing I...3
WEB 111 Intro to Web Graphics 3
WEB 151 Mobile Application Development 1 3
WEB 220 Advanced Multimedia.......................................3
WEB 240 Internet Security 3

Total Credit Hours Required 70

DEVELOPMENTAL COURSE REQUIREMENTS*
CTS 080 Computing Fundamentals...............................3
ENG 090 Composition Strategies...................................3
MAT DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 5
RED 090 Improved College Reading.............................4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Web Technologies • A25290
Suggested Program Sequence Day

	Class	Lab	Clin/WkExp	Credit
Fall - 1st year				
ACA 111 College Student Success	1	0	0	1
CIS 110 Introduction to Computers	2	2	0	3
CIS 115 Intro to Prog & Logic	2	3	0	3
DBA 110 Database Concepts & Apps	2	3	0	3
WEB 110 Internet Web Fundamentals	2	2	0	3
MAT 140 Survey of Math	3	0	0	3
MAT 140A Survey of Math Lab	0	2	0	1
Total	12	12	0	17
Spring - 1st year				
WEB 140 Web Development Tools	2	2	0	3
CTS 115 Info Sys Business Concepts	3	0	0	3
ENG 111 Expository Writing	3	0	0	3
NET 125 Networking Basics	1	4	0	3
WEB 120 Intro Internet Multimedia	2	2	0	3
WEB Program Elective	0	0	0	3
Total	11	8	0	18
Summer - 1st year				
ENG 114 Prof Research & Reporting	3	0	0	3
OR ENG 113 Literature-Based Research	3	0	0	3
Humanities/Fine Arts Elective	3	0	0	3
Total	6	0	0	6
Fall - 2nd year				
SEC 110 Security Concepts	2	2	0	3
WEB 250 DataBase Driven Websites	2	2	0	3
WEB 115 Web Markup and Scripting	2	2	0	3
WEB 230 Implementing Web Serv	2	2	0	3
WEB Elective	0	0	0	3
Total	8	8	0	15
Spring - 2nd year				
WEB 210 Web Design	2	2	0	3
WEB 289 Internet Tech Project	1	4	0	3
NOS 110 Operating Systems Concepts	2	3	0	3
COE XXX Co-op Work Experience	0	0	20	2
Social/Behavioral Science Elective	3	0	0	3
Total	8	9	20	14
Grand Total	45	37	20	70

WEB TECHNOLOGIES
Basic Web Developer • Certificate Program (C25290)

MAJOR COURSES: SHC
CSC   151   JAVA Programming 3
WEB   110   Internet/Web Fundamentals 3
WEB   120   Intro Internet Multimedia 3
WEB   140   Web Development Tools.................................3

Total Credit Hours Required **12**

Basic Web Developer Certificate • C25290 Suggested Sequence

Fall - 1st year
CSC 151   JAVA Programming   2 3 0 3
WEB 110   Internet Web Fundamentals   2 2 0 3

                    Total   4 5 0 6

Spring - 1st year
WEB 140   Web Development Tools   2 2 0 3
WEB 120   Intro Internet Multimedia   2 2 0 3

                    Total   4 4 0 6

          Grand Total   8 9 0 12

WEB TECHNOLOGIES
Webmaster • Certificate Program (C2529001)

MAJOR COURSES: SHC
CTS   115   Info Sys Business Concept.................................3
SEC   110   Security Concepts 3
WEB   115   Web Markup and Scripting 3
WEB   210   Web Design...3

Total Credit Hours Required **12**

Web Technologies - Webmaster Certificate • C2529001 Suggested Sequence

Fall - 1st year
SEC 110   Security Concepts   2 2 0 3
WEB 115   Web Markup and Scripting   2 2 0 3

                    Total   4 4 0 6
Spring - 1st year
CTS 115   Info Sys Business Concept   3 0 0 3
WEB 210   Web Design   2 2 0 3

                    Total   5 2 0 6

          Grand Total   9 6 0 12

WELDING TECHNOLOGY
Diploma Program (D50420)

Courses required to meet graduation requirements in this curriculum are offered during day, afternoon, and evening hours. Minimum time for completion: five semesters full-time attendance. Students may begin any semester. The Diploma is awarded graduates of this curriculum. A Certificate is awarded graduates who complete the certificate program option.

The Welding Technology curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in the welding and metal industry. Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses in math, blueprint reading, metallurgy, welding inspection, and destructive and non-destructive testing provides the student with industry-standard skills developed through classroom training and practical application. Successful graduates of the Welding Technology curriculum may be employed as entry-level technicians in welding and metalworking industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, supervision, and welding-related self-employment.

GENERAL EDUCATION COURSES: SHC
English/Communications:
ENG   102   Applied Communications II 3
       OR
ENG   111   Expository Writing 3
Natural Sciences/Mathematics:
MAT   101   Applied Mathematics I 3
       OR
MAT   115   Mathematical Models 3

MAJOR COURSES:
WLD   110   Cutting Processes..2
WLD   115   SMAW (Stick) Plate 5
  OR
WLD   115AC   SMAW (Stick) Plate-AC 2
WLD   115BC   SMAW (Stick) Plate-BC..2
WLD   115CC   SMAW (Stick) Plate-CC..1

WLD   116   SMAW (Stick) Plate/Pipe 4
  OR
WLD   116AB   SMAW (Stick) Plate/Pipe-AB 2
WLD   116BB   SMAW (Stick) Plate/Pipe-BB 2

WLD   121   GMAW (MIG) FCAW/Plate.....................................4
WLD   131   GTAW (TIG) Plate..4
WLD   141   Symbols & Specifications...3
WLD   143   Welding Metallurgy 2

WLD   215   SMAW (Stick) Pipe 4
  OR
WLD   215AB   SMAW (Stick) Pipe-AB 2
WLD   215BB   SMAW (Stick) Pipe-BB..2

WLD   261   Certification Practices...2

OTHER REQUIRED COURSES:
WLD   262   Inspection & Testing...3

Total Credit Hours Required **39**

DEVELOPMENTAL COURSE REQUIREMENTS*

MAT   DMA 010, DMA 020, DMA 030 3
RED   080   Intro to College Reading...4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Welding Technology Con't.

Welding Technology - Diploma • D50420
Suggested Program Sequence Evening

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
WLD 110	Cutting Processes	1	3	0	2
WLD 115AC	SMAW (Stick) Plate-AC	1	3	0	2
WLD 143	Welding Metallurgy	1	2	0	2
	Total	3	8	0	6
Spring - 1st year					
WLD 115BC	SMAW (Stick) Plate-BC	1	3	0	2
WLD 115CC	SMAW (Stick) Plate-CC	0	3	0	1
WLD 141	Symbols & Specifications	2	2	0	3
MAT 101	Applied Mathematics I	2	2	0	3
OR	MAT 115 Mathematical Models	2	2	0	3
	Total	5	10	0	9
Fall - 2nd year					
WLD 116AB	SMAW (Stick) Plate/Pipe-AB	1	4	0	2
WLD 116BB	SMAW (Stick) Plate/Pipe-BB	0	5	0	2
ENG 102	Applied Communications II	3	0	0	3
OR	ENG 111 Expository Writing	3	0	0	3
	Total	4	9	0	7
Spring - 2nd year					
WLD 121	GMAW (MIG) FCAW/Plate	2	6	0	4
WLD 215AB	SMAW (Stick) Pipe-AB	1	4	0	2
WLD 215BB	SMAW (Stick) Pipe-BB	0	5	0	2
WLD 262	Inspection & Testing	2	2	0	3
	Total	5	17	0	11
Fall - 3rd year					
WLD 131	GTAW (TIG) Plate	2	6	0	4
WLD 261	Certification Practices	1	3	0	2
	Total	3	9	0	6
	Grand Total	20	53	0	39

WELDING TECHNOLOGY Certificate Program (C50420)

MAJOR COURSES: **SHC**
WLD   110   Cutting Processes 2
WLD   115AC   SMAW (Stick) Plate-AC 2
WLD   115BC   SMAW (Stick) Plate-BC 2
WLD   115CC   SMAW (Stick) Plate-CC 1
WLD   121   GMAW (MIG) FCAW/Plate...4
WLD   131   GTAW (TIG) Plate 4
WLD   141   Symbols & Specifications 3

Total Credit Hours Required 18

Welding Technology - Certificate • C50420 - Suggested Sequence

		Class	Lab	Clin/WkExp	Credit
Fall - 1st year					
WLD 110	Cutting Processes	1	3	0	2
WLD 115AC	SMAW (Stick) Plate-AC	1	3	0	2
	Total	2	6	0	4
Spring - 1st year					
WLD 115BC	SMAW (Stick) Plate-BC	1	3	0	2
WLD 115CC	SMAW (Stick) Plate-CC	0	3	0	1
	Total	1	6	0	3
Fall - 2nd year					
WLD 121	GMAW (MIG) FCAW/Plate	2	6	0	4
	Total	2	6	0	4
Spring - 2nd year					
WLD 141	Symbols & Specifications	2	2	0	3
WLD 131	GTAW (TIG) Plate	2	6	0	4
	Total	4	8	0	7
	Grand Total	9	26	0	18

SPECIAL PROGRAMS

Associate in Applied Science Degree Curricula:
• Funeral Service Education

Diploma Curriculum:
• NC Funeral Director

Certificate Curriculum:
• Truck Driver Training

Special programs are offered on demand in conjunction with other institutions when justified by employment needs and student interest. Details concerning current special programs are included on the following pages. Additional information may be obtained from the college website.

FUNERAL SERVICE EDUCATION
**A.A.S. Program (A55260) Collaborative Program
Catawba Valley Community College/
Fayetteville Technical Community College**

Funeral Service Education is an associate degree program offered at CVCC by Fayetteville Technical Community College. The Funeral Service Education courses are offered by FTCC via a live interactive video feed in one of the NC Information Highway classrooms at CVCC, with the general education courses being offered by CVCC. For details, please contact CVCC's Advising Center 828-327-7000, Ext. 4687. The Funeral Service Education curriculum provides students with the opportunity to become proficient in basic funeral service skills. In addition to the general education courses offered in the curriculum, technical courses such as human anatomy, embalming theory and practice, embalming chemistry, restorative arts, funeral law, and funeral home operations are taught. Students in the FTCC Funeral Service Education program are also required to take the National Board Exam for Funeral Service as a condition of Graduation. Graduates of the curriculum, upon passing the state or national exam and completing an internship in a funeral home, will be qualified for employment as embalmers and/or funeral directors. The Associate in Applied Science Degree in Funeral Service Education at Fayetteville Technical Community College is accredited by:

American Board of Funeral Service Education
3432 Ashland Avenue, Suite U • St. Joseph, MO 64506
Telephone: 816-223-3747

NC FUNERAL DIRECTOR
**Diploma Program (D55260) • Collaborative Program
Catawba Valley Community College/
Fayetteville Technical Community College**

Funeral Service Education -- NC Funeral Director is a diploma program offered at CVCC by Fayetteville Technical Community College. The Funeral Service Education courses are offered by FTCC via a live interactive video feed in one of the NC Information Highway classrooms at CVCC, with the general education courses being offered by CVCC. For details, please contact CVCC's Advising Center 828-327-7000, Ext. 4687. The Funeral Service Education curriculum provides students with the opportunity to acquire the funeral service education necessary to become proficient in basic funeral directing skills. Students completing the diploma are eligible to sit for the NC Board of Funeral Service Funeral Director state exam. This academic program is designed to meet specific state or professional needs. It is not accredited by the American Board of Funeral Service Education owing to the fact that it does not include instruction in the following areas: Anatomy, Chemistry, Embalming, Microbiology and Restorative Arts. Students graduating from this program are not eligible to take the National Board Examination or any state examination for which graduation from an ABFSE accredited program is required.

TRUCK DRIVER TRAINING
**Certificate Program (C60300) • Collaborative Program
Catawba Valley Community College/
Caldwell Community College & Technical Institute**

Truck Driver Training is an eight-week certificate program (384 hours) that teaches the basics of professional truck driving. In addition to classroom instruction, students will practice driving range maneuvers along with rural, city, and interstate driving in 18-wheel, tractor-trailer rigs. This program will prepare the student for a beginning career in driving a commercial motor vehicle. Graduates of this program are always in demand. For details, call 828-726-2386 or 828-726-2380. The Truck Driver Training curriculum prepares individuals to drive tractor trailer 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, trip planning, vehicle maintenance, safety procedures, daily logs, defensive driving, freight handling, security, and fire protection. Highway driving, training range exercises, and classroom lectures are used to develop the student's knowledge and skills. Graduates of this program will have a Class A driver's license and may be immediately employed by commercial trucking firms. They may also become owners/operators and work as private contract haulers.

CAREER AND COLLEGE PROMISE
(High School Students)

The Career and College Promise program is established by the State Board of Education and the State Board of Community Colleges.

Career and College Promise provides dual enrollment educational opportunities for eligible North Carolina high school students in order to accelerate completion of college certificates, diplomas, and associate degrees that lead to college transfer or provide entry-level job skills. North Carolina community colleges may offer the following Career and College Promise pathways aligned with the K-12 curriculum and career and college ready standards adopted by the State Board of Education:

- A Core 44 College Transfer Pathway leading to a minimum of 30 hours of college transfer credit
- A Career and Technical Education Pathway leading to a certificate, diploma or degree.

Core 44 College Transfer Pathway

1. The Career and College Promise Core 44 College Transfer Pathway requires the completion of at least thirty semester hours of transfer courses, including English and mathematices.

2. To be eligible for enrollment, a high school student must meet the following criteria:
   a. Be a high school junior or senior;
   b. Have a weighted GPA of 3.0 on high school courses; and
   c. Demonstrate college readiness on an assessment or placement test. A student must demonstrate college readiness in English, reading and mathematics to be eligible for enrollment in a Core 44 College Transfer Pathway.

3. A high school junior or senior who does not demonstrate college-readiness on an approved assessment or placement test may be provisionally enrolled in a College Transfer Pathway. To qualify for Provisional Status, a student must meet the following criteria:
   a. Have a cumulative weighted GPA of 3.5;
   b. Have completed two years of high school English with a grade of 'C' or higher;
   c. Have completed high school Algebra II (or a higher level math class) with a grade of 'C' or higher;
   d. Obtain the written approval of the high school principal or his/her designee; and,
   e. Obtain the written approval of the community college president or his/her designee.

A Provisional Status student may register only for college mathematics (MAT) and college English (ENG) courses within the chosen Pathway. To be eligible to register for other courses in the Pathway, the student must first successfully complete matematics and English courses with a grade of 'C' or higher.

4. To maintain eligibility for continued enrollment, a student must
   a. Continue to make progress toward high school graduation, and
   b. Maintain a 2.0 GPA in college coursework after completing two courses.

5. A student must enroll in one Core 44 College Transfer Pathway program of study and may not substitute courses in one program for courses in another.

6. A student may change his or her program of study major with approval of the high school principal or his/her designee and the college's chief student development administrator.

7. With approval of the high school principal or his/her designee and the college's chief student development administrator, a student who completes a Core 44 College Transfer Pathway while still enrolled in high school may continue to earn college transfer credits leading to the completion of the 44-hour general education transfer core.

8. With approval of the high school principal or his/her designee and the college's chief student development administrator, a student may enroll in both a Core 44 College Transfer Pathway program of study and a Career Technical Education program of study.

Career Technical Education Pathway

1. The Career and College Promise Career Technical Education Pathway leads to a certificate or diploma aligned with a high school Career Cluster.

2. To be eligible for enrollment, a high school student must meet the following criteria:
   a. Be a high school junior or senior;
   b. Have a weighted GPA of 3.0 on high school courses or have the recommendation of the high school principal or his/her designee; and
   c. Meet the prerequisites for the career pathway.

3. High school counselors should consider students' PLAN scores in making pathway recommendations.

4. College Career Technical Education courses may be used to provide partial or full fulfillment of a four-unit career cluster. Where possible, students should be granted articulated credit based on the local or state North Carolina High School to Community College articulation agreement.

5. To maintain eligibility for continued enrollment, a student must
   a. Continue to make progress toward high school graduation, and
   b. Maintain a 2.0 in college coursework after completing two courses.

6. A student must enroll in one program of study and may not substitute courses in one program for courses in an other. The student may change his or her program of study major with approval of the high school principal or his/her designee and the college's chief student development administrator.

CORE 44 College Transfer Pathway
Humanities and Social Science (P1012A)

GENERAL EDUCATION COURSES:			SHC

English/Communication (6 SHC)

| ENG | 111 | Expository Writing | 3 |
| ENG | 113 | Literature-Based Research | 3 |

Humanities/Fine Arts (6 SHC)

| ART | 111 | Art Appreciation | 3 |
| ENG | 232 | American Literature II | 3 |

Natural Sciences/Mathematics (7 SHC)

| BIO | 111 | General Biology I | 4 |
| MAT | 161 | College Algebra | 3 |

Social/Behavioral Sciences (6 SHC)

| HIS | 121 | Western Civilization | 3 |
| PSY | 150 | General Psychology | 3 |

Other Required General Education (6 SHC)

| COM | 231 | Public Speaking | 3 |
| SPA | 111 | Elementary Spanish I | 3 |

OTHER REQUIRED COURSES (3 SHC)

ACA	122	College Transfer Success	1
MAT	161A	College Algebra Lab	1
SPA	181	Spanish Lab 1	1

Total Credit Hours Required 34

CORE 44 College Transfer Pathway
Business and Economics (P1012B)

GENERAL EDUCATION COURSES:			SHC

English/Communication (6 SHC)

| ENG | 111 | Expository Writing | 3 |
| ENG | 113 | Literature-Based Research | 3 |

Humanities/Fine Arts (3 SHC)

| ENG | 232 | American Literature II | 3 |

Natural Sciences/Mathematics (7 SHC)

| BIO | 111 | General Biology I | 4 |
| MAT | 161 | College Algebra | 3 |

Social/Behavioral Sciences (9 SHC)

ECO	251	Principles of Microeconomics	3
HIS	121	Western Civilization	3
SOC	210	Introduction to Sociology	3

Other Required General Education (6 SHC)

| CIS | 110 | Introduction to Computers | 3 |
| COM | 231 | Public Speaking | 3 |

OTHER REQUIRED COURSES (2 SHC)

| ACA | 122 | College Transfer Success | 1 |
| MAT | 161A | College Algebra Lab | 1 |

Total Credit Hours Required 33

CORE 44 College Transfer Pathway
Life and Health Sciences (P1042A)

GENERAL EDUCATION COURSES:			SHC

English/Communication (6 SHC)

| ENG | 111 | Expository Writing | 3 |
| ENG | 113 | Literature-Based Research | 3 |

Humanities/Fine Arts (3 SHC)

| ENG | 232 | American Literature II | 3 |

Natural Sciences/Mathematics (19 SHC)

BIO	111	General Biology I	4
BIO	112	General Biology II	4
CHM	151	General Chemistry I	4
CHM	152	General Chemistry II	4
MAT	171	Precalculus Algebra	3

Social/Behavioral Sciences (3 SHC)

| HIS | 121 | Western Civilization | 3 |

OTHER REQUIRED COURSES (2 SHC)

| ACA | 122 | College Transfer Success | 1 |
| MAT | 171A | Precalculus Algebra Lab | 1 |

Total Credit Hours Required 33

CORE 44 College Transfer Pathway
Engineering and Mathematics (P1042B)

GENERAL EDUCATION COURSES:			SHC

English/Communication (6 SHC)

| ENG | 111 | Expository Writing | 3 |
| ENG | 113 | Literature-Based Research | 3 |

Humanities/Fine Arts (3 SHC)

| ENG | 232 | American Literature II | 3 |

Natural Sciences/Mathematics (14 SHC)

CHM	151	General Chemistry I	4
MAT	171	Precalculus Algebra	3
MAT	172	Precalculus Trigonometry	3
MAT	271	Calculus I	4

Social/Behavioral Sciences (6 SHC)

| HIS | 121 | Western Civilization | 3 |
| ECO | 251 | Principles of Microeconomics | 3 |

OTHER REQUIRED COURSES (3 SHC)

ACA	122	College Transfer Success	1
MAT	171A	Precalculus Algebra Lab	1
MAT	172A	Precalculus Trig Lab	1

Total Credit Hours Required 32

CAREER TECHNICAL CAREER PATHWAY

Advertising and Graphic Design • Pathway (C30100P)

CORE COURSES (12 SHC):			SHC
GRA	151	Computer Graphics I	2
GRA	152	Computer Graphics II	2
GRD	110	Typography I	3
GRD	121	Drawing Fundamentals I	2
GRD	141	Graphic Design I	4
GRD	142	Graphic Design II	4

Total Credit Hours Required 17

Air Conditioning, Heating, and Refrigeration Technology Pathway (D35100P)

GENERAL EDUCATION COURSES (6 SHC)			SHC
ENG	102	Applied Communications II	3
MAT	101	Applied Mathematics I	3

CORE COURSES (20 SHC)			
AHR	110	Intro to Refrigeration	5
AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	4
AHR	113	Comfort Cooling	4
AHR	114	Heat Pump Technology	4

OTHER MAJOR COURSES (10 SHC)			
AHR	130	HVAC Controls	3
AHR	160	Refrigerant Certification	1
AHR	180	HVACR Customer Relations	1
AHR	210	Residential Building Code	2
AHR	211	Residential System Design	3

Total Credit Hours Required 36

DEVELOPMENTAL COURSE REQUIREMENTS*			
CTS	080	Computing Fundamentals	3
MAT	DMA 010, DMA 020, DMA 030		3
RED	080	Intro to College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Air Conditioning, Heating, and Refrigeration Technology
Pathway (C35100P)

CORE COURSES (17 SHC)			SHC
AHR	110	Intro to Refrigeration	5
AHR	112	Heating Technology	4
AHR	113	Comfort Cooling	4
AHR	114	Heat Pump Technology	4

Total Credit Hours Required 17

Automotive Systems Technology Pathway (D60160P)

GENERAL EDUCATION COURSES (6 SHC)			SHC

English/Communication:

ENG	111	Expository Writing	3

Natural Science/Mathematics:

MAT	115	Mathematical Models	3

MAJOR COURSES:

CORE COURSES (18 SHC)			
AUT	141	Suspension & Steering Sys	3
AUT	151	Brake Systems	3
AUT	181	Engine Performance 1	3
TRN	110	Intro to Transport Tech	2
TRN	120	Basic TraspElectricity	5
TRN	140	Transp Climate Control	2

OTHER MAJOR COURSES (21 SHC)			
AUT	141A	Suspension & Steering Lab	1
AUT	151A	Brake Systems Lab	1
AUT	116	Engine Repair	3
AUT	116A	Engine Repair Lab	1
AUT	163	Adv Auto Electricity	3
AUT	181A	Engine Performance 1 Lab	1
AUT	183	Engine Performance 2	4
AUT	221	Auto Transm/Transaxles	3
AUT	221A	Auto Transm/Transax Lab	1
AUT	231	Man Trans/Axles/Drtrains	3

OTHER REQUIRED:

OTHER REQUIRED COURSES (3 SHC)			
AUT	231A	Man Trans/Ax/Drtrains Lab	1
TRN	140A	Transp Climate Cont Lab	2

Total Credit Hours Required 48

Coop Option: Qualified Students may elect to take up to 4 credit hours of cooperative education in place of AUT 116A, AUT 141A, AUT 151A, AUT 181A, AUT 221A, AUT 241A.

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
ENG	090	Improved College Reading	4
MAT	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050		5
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Automotive Systems Technology Pathway (C60160P)

CORE COURSES (7 SHC)			
TRN	110	Intro to Transport Tech	2
TRN	120	Basic TraspElectricity	5

OTHER MAJOR COURSES (24 SHC)			
AUT	141	Suspension & Steering Sys	3
AUT	141A	Suspension & Steering Lab	1
AUT	151	Brake Systems	3
AUT	151A	Brake Systems Lab	1

Total Credit Hours Required 17

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
MAT	DMA 010, DMA 020, DMA 030		3
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Computer Integrated Machining Technology
Pathway (D50210P)

GENERAL EDUCATION COURSES (6 SHC)			SHC
ENG	111	Expository Writing	3
MAT	121	Algebra/Trigonometry I	3

CORE COURSES (16 SHC)			
MAC	122	CNC Turning	2
MAC	124	CNC Milling	2
MAC	131	Blueprint Reading/Mach. I	2
MAC	141	Machining Applications I	4
MAC	142	Machining Applications II	4
MEC	110	Intro to CAD/CAM	2

OTHER MAJOR COURSES (14 SHC)			
MAC	132	Blueprint Reading/Mach. II	2
MAC	151	Machining Calculations	2
MAC	222	Advanced CNC Turning	2
MAC	224	Advanced CNC Milling	2
MAC	231	CAM: CNC Turning	3
MAC	232	CAM: CNC Milling	3

OTHER REQUIRED COURSES (2 SHC)			
CIS 111		Basic PC Literacy	2

Total Credit Hours Required 38

DEVELOPMENTAL COURSE REQUIREMENTS*

CTS	080	Computing Fundamentals	3
ENG	090	Composition Strategies	3
MAT	DMA 010, DMA 020, DMA 030		3
RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Cosmetology • Pathway (D55140P)

GENERAL EDUCATION COURSES (6 SHC)			SHC
ENG	102	Applied Communications II	3
PSY	150	General Psychology	3

CORE COURSES (41 SHC)			
COS	111	Cosmetology Concepts I	4
OR			
COS	111AB	Cosmetology Concepts I-AB	2
COS	111BB	Cosmetology Concepts I-BB	2
COS	112	Salon I	8
OR			
COS	112AB	Salon I-AB	4
COS	112BB	Salon I-BB	4
COS	113	Cosmetology Concepts II	4
OR			
COS	113AB	Cosmetology Concepts II-AB	2
COS	113BB	Cosmetology Concepts II-BB	2
COS	114	Salon II	8
OR			
COS	114AB	Salon II-AB	4
COS	114BB	Salon II-BB	4
COS	115	Cosmetology Concepts III	4
OR			
COS	115AB	Cosmetology Concepts III-AB	2
COS	115BB	Cosmetology Concepts III-BB	2
COS	116	Salon III	4
OR			
COS	116AB	Salon III-AB	2
COS	116BB	Salon III-BB	2
COS	117	Cosmetology Concepts IV	2
OR			
COS	117AB	Cosmetology Concepts IV-AB	1
COS	117BB	Cosmetology Concepts IV-BB	1
COS	118	Salon IV	7

Total Credit Hours Required 47

DEVELOPMENTAL COURSE REQUIREMENTS*

RED	090	Improved College Reading	4

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Criminal Justice Technology
Law Enforcement Pathway (C55180P)

CORE COURSES (12 SHC)			SHC
CJC	111	Intro to Criminal Justice	3
CJC	113	Juvenille Justice	3
CJC	131	Criminal Law	3
CJC	212	Ethics & Comm Relations	3

OTHER REQUIRED COURSES (3 SHC)			
CJC	121	Law Enforcement Operations	3

Total Credit Hours Required 15

Criminal Justice Technology-Latent Evidence Concentration
Crime Scene Pathway (C5518AP)

CORE COURSES (16 SHC)			SHC
CJC	111	Intro to Criminal Justice	3
CJC	144	Crime Scene Processing	3
CJC	146	Trace Evidence	3
CJC	221	Investigative Principles	4
CJC	245	Friction Ridge Analysis	3

OTHER REQUIRED COURSES (2 SHC)			
CJC	114	Investigative Photography	2

Total Credit Hours Required 18

Electrical/Electronics Technology Pathway (C35220P)

CORE COURSES (13 SHC)			SHC
ELC	112	DC/AC Electricity	5
ELC	113	Basic Wiring I	4
ELC	115	Industrial Wiring	4

OTHER MAJOR COURSES (4 SHC)			
BPR	111	Blueprint Reading	2
ELC	118	National Electrical Code	2

Total Credit Hours Required 17

Graphic Arts and Imaging Technology Pathway (C30180P)

CORE COURSES (14 SHC)			SHC
GRA	121	Graphic Arts I	4
GRA	151	Computer Graphics I	2
GRA	152	Computer Graphics II	2
GRA	255	Image Manipulation I	2
GRD	141	Graphic Design I	4

OTHER REQUIRED COURSES (2 SHC)			
PRN	155	Screen Printing I	2

Total Credit Hours Required 16

Health Information Technology Pathway (C25200P)

CORE COURSES (12 SHC)			SHC
HIT	110	Fundamentals of HIM	3
HIT	112	Health Law and Ethics	3
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3

OTHER REQUIRED COURSES (3 SHC)			
CIS	110	Introduction to Computers	3

Total Credit Hours Required 15

Healthcare Management Technology
Receptionist Pathway (C45360P)

CORE COURSES (15 SHC)			SHC
HMT	110	Intro to Healthcare Mgt	3
HMT	210	Medical Insurance	3
MED	121	Medical Terminology I (1st 8 weeks)	3
MED	122	Medical Terminology II (2nd 8 weeks)	3
OST	149	Medical Legal Issues	3

OTHER REQUIRED COURSES (1 SHC)			
MED	114	Prof Interac in Heal Care	1

Total Credit Hours Required 16

DEVELOPMENTAL COURSE REQUIREMENTS*
RED   080   Intro to College Reading 4
*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Horticulture Technology Pathway (C15240P)

CORE COURSES (12 SHC)			SHC
HOR	160	Plant Materials I	3
HOR	162	Applied Plant Science	3
HOR	164	Hort Pest Management	3
HOR	168	Plant Propagation	3

OTHER MAJOR COURSES (6 SHC)			
HOR	110	Intro to Landscaping	2
HOR	118	Equipment Op & Maint	2
HOR	255	Interiorscapes	2

Total Credit Hours Required 18

Photographic Technology Pathway (C30280P)

CORE COURSES (14 SHC)			SHC
PHO	110	Fund of Photography	5
PHO	115	Basic Studio Lighting	4
PHO	139	Intro to Digital Imagining	2
PHO	224	Multimedia Production	3

Total Credit Hours Required 14

DEVELOPMENTAL COURSE REQUIREMENTS*
RED   090   Intro to College Reading 4
*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

WeldingTechnology Pathway (D50420P)

GENERAL EDUCATION COURSES (6 SHC)			SHC
ENG	102	Applied Communications II	3
MAT	101	Applied Mathematics I	3

CORE COURSES (18 SHC)			
WLD	110	Cutting Processes	2
WLD	115	SMAW (Stick) Plate	5
OR			
WLD	115AC	SMAW (Stick) Plate-AC	2
WLD	115BC	SMAW (Stick) Plate-BC	2
WLD	115CC	SMAW (Stick) Plate-CC	1
WLD	121	GMAW (MIG) FCAW/Plate	4
WLD	131	GTAW (TIG) Plate	4
WLD	141	Symbols & Specifications	3

OTHER MAJOR COURSES (18 SHC)			
ELC	111	Intro to Electricity	3
WLD	116	SMAW (Stick) Plate/Pipe	4
OR			
WLD	116AB	SMAW (Stick) Plate/Pipe-AB	2
WLD	116BB	SMAW (Stick) Plate/Pipe-BB	2
WLD	143	Welding Metallurgy	2
WLD	215	SMAW (Stick) Pipe	4
OR			
WLD	215AB	SMAW (Stick) Pipe-AB	2
WLD	215BB	SMAW (Stick) Pipe-BB	2
WLD	261	Certification Practices	2
WLD	262	Inspection & Testing	3

Total Credit Hours Required 42

DEVELOPMENTAL COURSE REQUIREMENTS*
MAT   DMA 010, DMA 020, DMA 030 3
RED   080   Introduction to College Reading 4
*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

112

113

Course Descriptions

Area of Study

Course Number   Course Title

Class hours | Lab hours | Clinical/Work Exp. hours | Credit hours

ACADEMIC RELATED

ACA 111 College Student Success   1 0 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.

Prerequisites: None. Corequisites: None. (F,S,SU,On demand)

Prerequisites   Corequisites   *Semester(s) Offered   Course Description

Prerequisites and Corequisites are based on minimum course requirements listed in the NCCCS Common Course Library and/or other course and program requirements established by Catawba Valley Community College.

*Coding System:

F - Fall   S - Spring   SU - Summer

On Demand - Course will be offered when sufficient students are available as well as an instructor.

(Coll/Tran) - Denotes College Transfer course.

ACADEMIC RELATED

ACA 111 College Student Success   1 0 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.
Prerequisites: None. Corequisites: None. (F,S,SU)

ACA 122 College Transfer Success (Coll/Tran)   1 0 0 1

This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions.
Prerequisites: None. Corequisites: None. (F,S)

ACCOUNTING

ACC 120 Prin of Financial Accounting (Coll/Tran)   3 2 0 4

This course introduces business decision-making accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making and address ethical considerations.
Prerequisites: None. Corequisites: CTS 080. (F,S)

ACC 121 Prin of Managerial Accounting (Coll/Tran)   3 2 0 4

This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems.
Prerequisites: ACC 120. Corequisites: None. (S)

ACC 129 Individual Income Taxes   2 2 0 3

This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms.
Prerequisites: None. Corequisites: None. (F)

ACC 130 Business Income Taxes   2 2 0 3

This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law relating to business organizations, electronic research and methodologies, and the use of technology for the preparation of business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms.
Prerequisites: None. Corequisites: None.

ACC 140 Payroll Accounting   1 2 0 2

This course covers federal and state laws pertaining to wages, payroll taxes, payroll tax forms, and journal and general ledger transactions. Emphasis is placed on computing wages; calculating social security, income, and unemployment taxes; preparing appropriate payroll tax forms; and journalizing/posting transactions. Upon completion, students should be able to analyze data, make appropriate computations, complete forms, and prepare accounting entries using appropriate technology.
Prerequisites: ACC 120. Corequisites: None. (S)

ACC 150 Acct Software Appl   1 2 0 2

This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to solve accounting problems. This course is offered only in a distant format (Internet).
Prerequisites: ACC 120. Corequisites: None. (S)

ACC 220 Intermediate Accounting I   3 2 0 4

This course is a continuation of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and an extensive analyses 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.
Prerequisites: ACC 120. Corequisites: None. (F)

ACC 221 Intermediate Acct II 3 2 0 4
This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analyses, present value applications, accounting changes, and corrections. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. Prerequisites: ACC 220. Corequisites: None. (S)

ACC 225 Cost Accounting 3 0 0 3
This course introduces the nature and purposes of cost accounting as an information system for planning and control. Topics include direct materials, direct labor, factory overhead, process, job order, and standard cost systems. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. Prerequisites: ACC 121. Corequisites: None. (F)

ACC 240 Gov & Not-for-Profit Acct 3 0 0 3
This course introduces principles and procedures applicable to governmental and not-for-profit organizations. Emphasis is placed on various budgetary accounting procedures and fund accounting. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. Prerequisites: ACC 121. Corequisites: None. (S)

ACC 269 Audit & Assurance Servcs 3 0 0 3
This course introduces selected topics pertaining to the objectives, theory and practices in engagements providing auditing and other assurance services. Topics will include planning, conducting and reporting, with emphasis on the related professional ethics and standards. Upon completion, students should be able to demonstrate an understanding of the types of professional services, the related professional standards, and engagement methodology. Prerequisites: ACC 220. Corequisites: None. (S)

AIR CONDITIONING, HEATING & REFRIGERATION

AHR 110 Intro to Refrigeration 2 6 0 5
This course introduces the basic refrigeration process used in mechanical refrigeration and air conditioning systems. Topics include terminology, safety, and identification and function of components; refrigeration cycle; and tools and instrumentation used in mechanical refrigeration systems. Upon completion, students should be able to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade. Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: CTS 080 **or** appropriate test score. (F)

AHR 111 HVACR Electricity 2 2 0 3
This course introduces electricity as it applies to HVACR equipment. Emphasis is placed on power sources, interaction of electrical components, wiring of simple circuits, and the use of electrical test equipment. Upon completion, students should be able to demonstrate good wiring practices and the ability to read simple wiring diagrams. Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: CTS 080 **or** appropriate test score . (F)

AHR 112 Heating Technology 2 4 0 4
This course covers the fundamentals of heating including oil, gas, and electric heating systems. Topics include safety, tools and instrumentation, system operating characteristics, installation techniques, efficiency testing, electrical power, and control systems. Upon completion, students should be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system. Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: CTS 080 **or** appropriate test score. (F)

AHR 113 Comfort Cooling 2 4 0 4
This course covers the installation procedures, system operations, and maintenance of residential and light commercial comfort cooling systems. Topics include terminology, component operation, and testing and repair of equipment used to control and produce assured comfort levels. Upon completion, students should be able to use psychometrics, manufacturer specifications, and test instruments to determine proper system operation. Prerequisites:RED080**or**appropriate placement test score.Corequisites:None.(S)

AHR 114 Heat Pump Technology 2 4 0 4
This course covers the principles of air source and water source heat pumps. Emphasis is placed on safety, modes of operation, defrost systems, refrigerant charging, and system performance. Upon completion, students should be able to understand and analyze system performance and perform routine service procedures. Prerequisites: AHR 110 **or** AHR 113. Corequisites: None. (S)

AHR 130 HVAC Controls 2 2 0 3
This course covers the types of controls found in residential and commercial comfort systems. Topics include electrical and electronic controls, control schematics and diagrams, test instruments, and analysis and troubleshooting of electrical systems. Upon completion, students should be able to diagnose and repair common residential and commercial comfort system controls. Prerequisites: AHR 111 **or** ELC 111. Corequisites: None. (S)

AHR 151 HVAC Duct Systems I 1 3 0 2
This course introduces the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work. Prerequisites: None. Corequisites: None. (F)

AHR 160 Refrigerant Certification 1 0 0 1
This course covers the requirements for the EPA certification examinations. Topics include small appliances, high pressure systems, and low pressure systems. Upon completion, students should be able to demonstrate knowledge of refrigerants and be prepared for the EPA certification examinations. Prerequisites: None. Corequisites: None. (S)

AHR 180 HVACR Customer Relations 1 0 0 1
This course introduces common business and customer relation practices that may be encountered in HVACR. Topics include business practices, appearance of self and vehicle, ways of handling customer complaints, invoices, telephone communications, and warranties. Upon completion, students should be able to present themselves to customers in a professional manner, understand how the business operates, complete invoices, and handle complaints. Prerequisites: None. Corequisites: None. (F,S)

AHR 210 Residential Building Code 1 2 0 2
This course covers the residential building codes that are applicable to the design and installation of HVAC systems. Topics include current residential codes as applied to HVAC design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of residential building codes that apply to specific areas of the HVAC trade. Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (S)

AHR 211 Residential System Design 2 2 0 3
This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system. Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: CTS 080 **or** appropriate test score. (F)

ANTHROPOLOGY

ANT 220 Cultural Anthropology (Coll/Tran) 3 0 0 3
This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed. Prerequisites: RED 090 **or** appropriate placement test score. Corequisites: None. (On demand)

ANT 221 Comparative Cultures (Coll/Tran) 3 0 0 3
This course provides an ethnographic survey of societies around the world covering their distinctive cultural characteristics and how these relate to cultural change. Emphasis is placed on the similarities and differences in social institutions such as family, economics, politics, education, and religion. Upon completion, students should be able to demonstrate knowledge of a variety of cultural adaptive strategies
Prerequisites: None Corequisites: None (F,S)

ANT 230 Physical Anthropology (Coll/Tran) **3 0 0 3**
This course introduces the scientific study of human evolution and adaptation. Emphasis is placed on evolutionary theory, population genetics, biocultural adaptation and human variation, as well as non-human primate evolution, morphology, and behavior. Upon completion, students should be able to demonstrate an understanding of the biological and cultural processes which have resulted in the formation of the human species.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

ARABIC

ARA 111 Elementary Arabic I (Coll/Tran) **3 0 0 3**
This course introduces the fundamental elements of the modern standard Arabic language within the cultural context of Arabic-speaking people. 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 Arabic and demonstrate cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. (On demand)
Prerequisites: None. Corequisites: ARA 181.

ARA 112 Elementary Arabic II (Coll/Tran) **3 0 0 3**
This course includes the basic fundamental elements of the modern standard Arabic language within the cultural context of Arabic-speaking people. 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 Arabic and demonstrate further cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/ or elective course requirement. (On demand)
Prerequisites: ARA 111 must pass with a grade of "C" or higher.
Corequisites: ARA 182.

ARA 181 Arabic Lab I (Coll/Tran) **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the modern standard Arabic language. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Arabic and to demonstrate cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. (On demand)
Prerequisites: None. Corequisites: ARA 111.

ARA 182 Arabic Lab II (Coll/Tran) **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the modern standard Arabic language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Arabic and demonstrate cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. (On demand)
Prerequisites: ARA 181 must pass with a grade of "C" or higher.
Corequisites: ARA 112.

ARCHITECTURE

ARC 111 Intro to Arch Technology **1 6 0 3**
This course introduces basic architectural drafting techniques, lettering, use of architectural and engineer scales, and sketching. Topics include orthographic, axonometric, and oblique drawing techniques using architectural plans, elevations, sections, and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum architectural standards.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: ARC 112. (F)

ARC 112 Constr Matls & Methods **3 2 0 4**
This course introduces construction materials and their methodologies. Topics include construction terminology, materials and their properties, manufacturing processes, construction techniques, and other related topics. Upon completion, students should be able to detail construction assemblies and identify construction materials and properties.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: ARC 111. (F)

ARC 113 Residential Arch Tech **1 6 0 3**
This course covers intermediate residential working drawings. Topics include residential plans, elevations, sections, details, schedules, and other related topics. Upon completion, students should be able to prepare a set of residential working drawings that are within accepted architectural standards.
Prerequisites: ARC 111; RED 080 **or** appropriate placement test score.
Corequisites: ARC 112. (S)

ARC 114 Architectural CAD **1 3 0 2**
This course introduces basic architectural CAD techniques. Topics include basic commands and system hardware and software. Upon completion, students should be able to prepare and plot architectural drawings to scale within accepted architectural standards.
Prerequisites: ARC 111; RED 080 **or** appropriate placement test score.
Corequisites: ARC 114A. (S)

ARC 114A Architectural CAD Lab **0 3 0 1**
This course provides a laboratory setting to enhance architectural CAD skills. Emphasis is placed on further development of commands and system operation. Upon completion, students should be able to prepare and plot scaled architectural drawings.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: ARC 114. (S)

ARC 119 Structural Drafting **2 2 0 3**
This course introduces basic concepts associated with sizing and detailing structural assemblies. Topics include vocabulary, span-to-depth ratios, code requirements, shop drawings, and other related topics. Upon completion, students should be able to perform simple calculations and prepare shop drawings and preliminary structural plans.
Prerequisites: ARC 113, MAT 121; RED 080 **or** appropriate placement test score. Corequisites: None. (F)

ARC 131 Building Codes **2 2 0 3**
This course covers the methods of researching building codes for specific projects. Topics include residential and commercial building codes. Upon completion, students should be able to determine the code constraints governing residential and commercial projects.
Prerequisites: ARC 112; RED 080 **or** appropriate placement test score.
Corequisites: None. (S)

ARC 132 Specifications and Contracts **2 0 0 2**
This course covers the development of written specifications and the implications of different contractual arrangements. Topics include specification development, contracts, bidding material research, and agency responsibilities. Upon completion, students should be able to write a specification section and demonstrate the ability to interpret contractual responsibilities.
Prerequisites: ARC 112; RED 080 **or** appropriate placement test score.
Corequisites: None. (S)

ARC 211 Light Constr Technology **1 6 0 3**
This course covers working drawings for light construction. Topics include plans, elevations, sections, and details; schedules; and other related topics. Upon completion, students should be able to prepare a set of working drawings which are within accepted architectural standards.
Prerequisites: ARC 111, ARC 112, ARC 114; RED 080 **or** appropriate placement test score. Corequisites: None. (F)

ARC 213 Design Project **2 6 0 4**
This course provides the opportunity to design and prepare a set of contract documents within an architectural setting. Topics include schematic design, design development, construction documents, and other related topics. Upon completion, students should be able to prepare a set of commercial contract documents.
Prerequisites: ARC 111, ARC 112, ARC 114, ARC 211; RED 080 **or** appropriate placement test score. Corequisites: None. (S)

ARC 220 Adv Architect CAD   **1 3 0 2**

This course provides file management, productivity, and CAD customization skills. Emphasis is placed on developing advanced proficiency techniques. Upon completion, students should be able to create prototype drawings and symbol libraries, compose sheets with multiple details, and use advanced drawing and editing commands.
Prerequisites: ARC 114; RED 080 **or** appropriate placement test score.
Corequisites: None. (F)

ARC 230 Environmental Systems   **3 3 0 4**

This course introduces plumbing, mechanical (HVAC), and electrical systems for the architectural environment. Topics include basic plumbing, mechanical, and electrical systems for residential and/or commercial buildings with an introduction to selected code requirements. Upon completion, students should be able to develop schematic drawings for plumbing, mechanical, and electrical systems and perform related calculations.
Prerequisites: ARC 111; MAT 121 **or** MAT 151 **or** MAT 161 **or** MAT 171 **or** MAT 175; RED 080 **or** appropriate placement test score. Corequisites: None. (S)

ARC 235 Architectural Portfolio   **2 3 0 3**

This course covers the methodology for the creation of an architectural portfolio. Topics include preparation of marketing materials and a presentation strategy using conventional and/or digital design media. Upon completion, students should be able to produce an architectural portfolio of selected projects.
Prerequisites: ARC 111, ARC 114; RED 080 **or** appropriate placement test score. Corequisites: None. (S)

ARC 240 Site Planning   **2 2 0 3**

This course introduces the principles of site planning, grading plans, and earthwork calculations. Topics include site analysis, site work, site utilities, cut and fill, soil erosion control, and other related topics. Upon completion, students should be able to prepare site development plans and details and perform cut and fill calculations.
Prerequisites: ARC 111; RED 080 **or** appropriate placement test score. Corequisites: ARC 211. (F)

ARC 250 Survey of Architecture   **3 0 0 3**

This course introduces the historical trends in architectural form. Topics include historical and current trends in architecture. Upon completion, students should be able to demonstrate an understanding of significant historical and current architectural styles.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (F)

ART

ART 111 Art Appreciation (Coll/Tran)   **3 0 0 3**

This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms, including but not limited to, sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media.
Prerequisites: None. Corequisites: None. (F, S, Su)

ART 114 Art History Survey I (Coll/Tran)   **3 0 0 3**

This course covers the development of art forms from ancient times to the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development.
Prerequisites: None. Corequisites: None. (On demand)

ART 130 Basic Drawing (Coll/Tran)   **0 4 0 2**

This course introduces basic drawing techniques and is designed to increase observation skills. Emphasis is placed on the fundamentals of drawing. Upon completion, students should be able to demonstrate various methods and their application to representational imagery.
Prerequisites: None. Corequisites: None. (On demand)

ART 131 Drawing I (Coll/Tran)   **0 6 0 3**

This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes.
Prerequisites: None. Corequisites: None. (On demand)

ART 132 Drawing II (Coll/Tran)   **0 6 0 3**

This course continues instruction in the language of drawing and the use of various materials. Emphasis is placed on experimentation in the use of drawing techniques, media, and graphic materials. Upon completion, students should be able to demonstrate increased competence in the expressive use of graphic form and techniques.
Prerequisites: ART 131. Corequisites: None. (On demand)

ART 140 Basic Painting (Coll/Tran)   **0 4 0 2**

This course introduces the mechanics of painting. Emphasis is placed on the exploration of painting media through fundamental techniques. Upon completion, students should be able to demonstrate a basic understanding and application of painting.
Prerequisites: None. Corequisites: None. (On demand)

ART 171 Computer Art I (Coll/Tran)   **0 6 0 3**

This course introduces the use of the computer as a tool for solving visual problems. Emphasis is placed on fundamentals of computer literacy and design through bit-mapped image manipulation. Upon completion, students should be able to demonstrate an understanding of paint programs, printers, and scanners to capture, manipulate, and output images.
Prerequisites: None. Corequisites: None. (On demand)

ART 231 Printmaking I (Coll/Tran)   **0 6 0 3**

This course introduces printmaking: its history, development techniques, and processes. Emphasis is placed on basic applications with investigation into image source and development. Upon completion, students should be able to produce printed images utilizing a variety of methods.
Prerequisites: None. Corequisites: None. (On demand)

ART 232 Printmaking II (Coll/Tran)   **0 6 0 3**

This course includes additional methods and printmaking processes. Emphasis is placed on the printed image as related to method, source, and concept. Upon completion, students should be able to produce expressive images utilizing both traditional and innovative methods.
Prerequisites: ART 231. Corequisites: None. (On demand)

ART 240 Painting I (Coll/Tran)   **0 6 0 3**

This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form.
Prerequisites: None. Corequisites: None. (On demand)

ART 241 Painting II (Coll/Tran)   **0 6 0 3**

This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety.
Prerequisites: ART 240. Corequisites: None. (On demand)

ART 264 Digital Photography I (Coll/Tran)   **1 4 0 3**

This course introduces digital photographic equipment, theory and processes. Emphasis is placed on camera operation, composition, computer photo manipulation and creative expression. Upon completion, students should be able to successfully expose, digitally manipulate, and print a well-conceived composition.
Prerequisites: None. Corequisites: None. (Su)

ART 271 Computer Art II (Coll/Tran)   **0 6 0 3**

This course includes advanced computer imaging techniques. Emphasis is placed on creative applications of digital technology. Upon completion, students should be able to demonstrate command of computer systems and applications to express their personal vision.
Prerequisites: ART 171 Corequisites: None. (On demand)

ART 274 Lettering Design (Coll/Tran)   **0 6 0 3**

This course introduces a variety of lettering forms and covers the manual development of these forms using a variety of materials. Emphasis is placed on developing correct size, design, weight, and proportion in a variety of type styles. Upon completion, students should be able to demonstrate competence in the rendering of various lettering styles, and their application in effective graphic design.
Prerequisites: None. Corequisites: None. (On demand)

ART 281 Sculpture I (Coll/Tran) **0 6 0 3**
This course provides an exploration of the creative and technical methods of sculpture with focus on the traditional processes. Emphasis is placed on developing basic skills as they pertain to three-dimensional expression in various media. Upon completion, students should be able to show competence in variety of sculptural approaches.
Prerequisites: None. Corequisites: None. (On demand)

ART 282 Sculpture II (Coll/Tran) **0 6 0 3**
This course builds on the visual and technical skills learned in ART 281. Emphasis is placed on developing original solutions to sculptural problems in a variety of media. Upon completion, students should be able to express individual ideas using the techniques and materials of sculpture.
Prerequisites: ART 281. Corequisites: None. (On demand)

ART 283 Ceramics I (Coll/Tran) **0 6 0 3**
This course provides an introduction to three-dimensional design principles using the medium of clay. Emphasis is placed on fundamentals of forming, surface design, glaze application, and firing. Upon completion, students should be able to demonstrate skills in slab and coil construction, simple wheel forms, glaze technique, and creative expression.
Prerequisites: None. Corequisites: None. (On demand)

ART 284 Ceramics II (Coll/Tran) **0 6 0 3**
This course covers advanced hand building and wheel techniques. Emphasis is placed on creative expression, surface design, sculptural quality, and glaze effect. Upon completion, students should be able to demonstrate a high level of technical competence in forming and glazing with a development of three-dimensional awareness.
Prerequisites: ART 283. Corequisites: None. (On demand)

ASTRONOMY

AST 151 General Astronomy I (Coll/Tran) **3 0 0 3**
This course introduces the science of modern astronomy with a concentration on the solar system. Emphasis is placed on the history and physics of astronomy and an introduction to the solar system, including the planets, comets, and meteors. Upon completion, students should be able to demonstrate a general understanding of the solar system. As Astronomy is a branch of physics, an emphasis will be placed on the physics concepts underlying topics covered in this course.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050; RED 090; **or** appropriate placement test scores. Corequisites: AST 151A. (F,S)

AST 151A General Astronomy I Lab (Coll/Tran) **0 2 0 1**
The course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system. Some day and evening observations will be required.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050; RED 090; **or** appropriate placement test scores. Corequisites: AST 151. (F,S)

AST 152 General Astronomy II (Coll/Tran) **3 0 0 3**
This course is a continuation of AST 151 with primary emphasis beyond the solar system. Topics include the sun, stars, galaxies, and the larger universe, including cosmology. Upon completion, students should be able to demonstrate a working knowledge of astronomy. As Astronomy is a branch of physics, an emphasis will be placed on the physics concepts underlying topics covered in this course.
Prerequisites: AST 151 must pass with a grade of "C" or higher, DMA 060, DMA 070, DMA 080. Corequisites: AST 152A. (S)

AST 152A General Astronomy II Lab (Coll/Tran) **0 2 0 1**
The course is a laboratory to accompany AST 152. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 152 and which provide practical experience. Upon completion, students should be able to demonstrate a working knowledge of astronomy. Some day and evening observations will be required.
Prerequisites: AST 151 must pass with a grade of "C" or higher, DMA 060, DMA 070, DMA 080. Corequisites: AST 152. (S)

AUTOMOTIVE

AUT 116 Engine Repair **2 3 0 3**
This course covers the theory, construction, inspection, diagnosis, and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: AUT 116A, TRN 110. (F)

AUT 116A Engine Repair Lab **0 3 0 1**
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.
Prerequisites: None. Corequisites: AUT 116. (F)

AUT 141 Suspension & Steering Sys **2 3 0 3**
This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: AUT 141A, TRN 110 . (F)

AUT 141A Suspension & Steering Lab **0 3 0 1**
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.
Prerequisites: None. Corequisites: AUT 141. (F)

AUT 151 Brake Systems **2 3 0 3**
This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydra-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: AUT 151A, TRN 110. (S)

AUT 151A Brake Systems Lab **0 3 0 1**
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.
Prerequisites: None. Corequisites: AUT 151. (S)

AUT 163 Adv Auto Electricity **2 3 0 3**
This course covers electronic theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of electronics, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.
Prerequisites: TRN 120. Corequisites: AUT 163A. (S)

AUT 163A Adv Auto Electricity Lab   0 3 0 1
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, troubleshooting and emerging electrical/electronic systems technologies. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.
Prerequisites: None. Corequisites: AUT 163. (S)

AUT 181 Engine Performance 1   2 3 0 3
This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information.
Prerequisites: None. Corequisites: AUT 181A, TRN 110. (F)

AUT 181A Engine Performance 1 Lab   0 3 0 1
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include overviews of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices and emerging engine performance technologies. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information.
Prerequisites: None. Corequisites: AUT 181. (F)

AUT 183 Engine Performance 2   2 6 0 4
This course covers study of the electronic engine control systems, the diagnostic process used to locate engine performance concerns and procedures used to restore normal operation. Topics will include currently used fuels and fuel systems, exhaust gas analysis, emission control components and systems, OBD II (on-board diagnostics) and inter-related electrical/electronic systems. Upon completion, students should be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information.
Prerequisites: AUT 181. Corequisites: None. (S)

AUT 212 Auto Shop Management   3 0 0 3
This course covers the principles of management essential to decision-making, communication, authority, and leadership. Topics include shop supervision, shop organization, customer relations, cost effectiveness and work place ethics. Upon completion, students should be able to describe basic automotive shop operation from a management standpoint.
Prerequisites: CTS 080, RED 080 or appropriate placement test score. Corequisites: None. (F)

AUT 221 Auto Transm/Transaxles   2 3 0 3
This course covers operation, diagnosis, service, and repair of automatic transmissions/transaxles. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair automatic drive trains.
Prerequisites: RED 080 or appropriate placement test score.
Corequisites: AUT 221A, TRN 110. (S)

AUT 221A Auto Transm/Transax Lab   0 3 0 1
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to diagnose and repair automatic drive trains.
Prerequisites: None. Corequisites: AUT 221. (S)

AUT 231 Man Trans/Axles/Drtrains   2 3 0 3
This course covers the operation, diagnosis, and repair of manual transmissions/transaxles, clutches, driveshafts, axles, and final drives. Topics include theory of torque, power flow, and manual drive train service and repair using appropriate

service information, tools, and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair manual drive trains.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: AUT 231A, TRN 110. (S)

AUT 231A Man Trans/Ax/Drtrains Lab   0 3 0 1
This course is an optional lab for the program that needs to meet NATEF hour standards but does not have a co-op component in the program. Topics include manual drive train diagnosis, service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to diagnose and repair manual drive trains.
Prerequisites: None. Corequisites: AUT 231. (F,S)

AUT 281 Adv Engine Performance   2 2 0 3
This course utilizes service information and specialized test equipment to diagnose and repair power train control systems. Topics include computerized ignition, fuel and emission systems, related diagnostic tools and equipment, data communication networks, and service information. Upon completion, students should be able to perform diagnosis and repair.
Prerequisites: AUT 163, AUT 183. Corequisites: None. (F)

BIOLOGY

BIO 111 General Biology I (Coll/Tran)   **3 3 0 4**
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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** appropriate placement test score; RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S,On demand)

BIO 112 General Biology II (Coll/Tran)   **3 3 0 4**
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.
Prerequisites: BIO 111 must pass with a grade of "C" or higher.
Corequisites: None. (F,S,On demand)

BIO 120 Introductory Botany (Coll/Tran)   **3 3 0 4**
This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants.
Prerequisites: BIO 110 **or** BIO 111 (must pass with a grade of "C" or higher).
Corequisites: None. (S)

BIO 130 Introductory Zoology (Coll/Tran)   **3 3 0 4**
This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate comprehension of animal form and function including comparative systems of selected groups.
Prerequisites: BIO 110 **or** BIO 111 (must pass with a grade of "C" or higher).
Corequisites: None. (F)

BIO 140 Environmental Biology (Coll/Tran)   **3 0 0 3**
This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporar environmental issues.
Prerequisites: BIO 111 must pass with a grade of "C" or higher.
Corequisites: BIO 140A. (On demand)

BIO   140A   Environmental Biology Lab (Coll/Tran)   **0 3 0 1**
This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues. Prerequisites: None. Corequisites: BIO 140. (On demand)

BIO   143   Field Biology Minicourse (Coll/Tran)   **1 2 0 2**
This course introduces the biological and physical components of a field environment. Emphasis is placed on a local field environment with extended field trips to other areas. Upon completion, students should be able to demonstrate an understanding of the biological and physical components of the specific biological environment.
Prerequisites: None. Corequisites: None. (On demand)

BIO   145   Ecology (Coll/Tran)   **3 3 0 4**
This course provides an introduction to ecological concepts using an ecosystems approach. Topics include energy flow, nutrient cycling, succession, population dynamics, community structure, and other related topics. Upon completion, students should be able to demonstrate comprehension of basic ecosystem structure and dynamics.
Prerequisites: None. Corequisites: None. (On demand)

BIO   146   Regional Natural History (Coll/Tran)   **3 3 0 4**
This course is an interdisciplinary and historical analysis of the natural resources of the region. Emphasis is placed on geology, climate, forest systems, watersheds, water resources, and fish and wildlife resources of the region. Upon completion, students should be able to demonstrate comprehension of the natural history and the integration of the natural resources of the region.
Prerequisites: None. Corequisites: None. (On demand)

BIO   155   Nutrition (Coll/Tran)   **3 0 0 3**
This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food, as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups.
Prerequisites: None. Corequisites: None. (On demand)

BIO   163   Basic Anat & Physiology (Coll/Tran)   **4 2 0 5**
This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040; RED 080 **or** appropriate placement test scores. Corequisites: None. (F,S,On demand)

BIO   168   Anatomy and Physiology I (Coll/Tran)   **3 3 0 4**
This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. Successful completion of high school chemistry (C), or a higher level chemistry course is recommended prior to taking BIO 168.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040; RED 090 **or** appropriate placement test scores. Corequisites: None. (F,S,On demand)

BIO   169   Anatomy and Physiology II (Coll/Tran)   **3 3 0 4**
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.
Prerequisites: BIO 168 must pass with a grade of "C" or higher. Corequisites: None. (F,S,On demand)

BIO   175   General Microbiology (Coll/Tran)   **2 2 0 3**
This course covers principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques.
Prerequisites: BIO 110 **or** BIO 111 (must pass with a grade of "C" or higher); **or** BIO 163 **or** BIO 168. Corequisites: None. (F,S,On demand)

BIO   221   Botany I (Coll/Tran)   **3 3 0 4**
This course provides an introduction to the higher vascular plants. Topics include the structure, function, growth, life cycles, reproduction, and economic importance. Upon completion, students should be able to describe the biology and value of the higher vascular plants.
Prerequisites: BIO 112. Corequisites: None. (On demand)

BIO   222   Botany II   **3 3 0 4**
This course includes a survey of the plant kingdom complete with a plant collection and field work. Emphasis is placed on ecology and the taxonomy of higher plants. Upon completion, students should be able to classify common plants.
Prerequisites: BIO 112. Corequisites: None. (On demand)

BIO   224   Local Flora Spring (Coll/Tran)   **1 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

BIO   225   Local Flora Summer (Coll/Tran)   **1 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

BIO   226   Local Flora Fall (Coll/Tran)   **1 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

BIO   227   Winter Plant ID (Coll/Tran)   **1 2 0 2**
This course provides an introduction to the identification of native plants. Emphasis is placed on plants in their winter condition. Upon completion, students should be able to identify a variety of native plants in their winter condition.
Prerequisites: None. Corequisites: None. (On demand)

BIO   230   Entomology (Coll/Tran)   **3 3 0 4**
This course covers the biology of insects. Topics include harmful and beneficial insects, their identification, classification, life cycles, behavior, distribution, economic importance, and the methods involved in collection and preservation. Upon completion, students should be able to identify common insects and describe their biology and ecology.
Prerequisites: BIO 112 must pass with a grade of "C" or higher. Corequisites: None. (On demand)

BIO   231   Invertebrate Zoology   **3 3 0 4**
This course introduces the principles of invertebrate animal biology. Emphasis is placed on the diversity, comparative anatomy, reproduction, development, behavior, ecology, evolution, and the importance of the major invertebrate phyla. Upon completion, students should be able to demonstrate knowledge of life at the invertebrate level.
Prerequisites: BIO 112. Corequisites: None. (On demand)

BIO   232   Vertebrate Zoology (Coll/Tran)   **3 3 0 4**
This course introduces the principles of animal biology of the chordate phylum. Emphasis is placed on the diversity, morphology, reproduction, development, behavior, ecology, evolution, and importance of the chordates. Upon completion, students should be able to demonstrate increased knowledge and comprehension of zoology as it applies to life.
Prerequisites: BIO 112. Corequisites: None. (On demand)

BIO 250 Genetics (Coll/Tran) **3 3 0 4**
This course covers principles of prokaryotic and eukaryotic cell genetics. Emphasis is placed on the molecular basis of heredity, chromosome structure, patterns of Mendelian and non-Mendelian inheritance, evolution, and biotechnological applications. Upon completion, students should be able to recognize and describe genetic phenomena and demonstrate knowledge of important genetic principles.
Prerequisites: BIO 112. Corequisites: None. (On demand)

BIO 275 Microbiology (Coll/Tran) **3 3 0 4**
This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms.
Prerequisites: BIO 110 **or** BIO 112 **or** BIO 163 **or** BIO 168 (must pass with a grade of "C" or higher). Corequisites: None. (F,S,On demand)

BIO 280 Biotechnology (Coll/Tran) **2 3 0 3**
This course provides experience in selected laboratory procedures. Topics include proper laboratory techniques in biology and chemistry. Upon completion, students should be able to identify laboratory techniques and instrumentation in basic biotechnology.
Prerequisites: BIO 111 **or** CHM 151 (must pass with a grade of "C" or higher). Corequisites: None. (On demand)

BLUEPRINT READING

BPR 111 Blueprint Reading **1 2 0 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.
Prerequisites: None. Corequisites: None. (F,S)

BUSINESS

BUS 110 Introduction to Business (Coll/Tran) **3 0 0 3**
This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects.
Prerequisites: None. Corequisites: None. (F)

BUS 115 Business Law I (Coll/Tran) **3 0 0 3**
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 selected business decision-making situations.
Prerequisites: None. Corequisites: None. (S)

BUS 116 Business Law II **3 0 0 3**
This course continues the study of ethics and business law. Emphasis is placed on bailments, sales, risk-bearing, forms of business ownership, and copyrights. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations.
Prerequisites: BUS 115. Corequisites: None. (On demand)

BUS 121 Business Math **2 2 0 3**
This course covers fundamental mathematical operations and their application to business problems. Topics include payroll, pricing, interest and discount, commission, taxes, and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts to business. Some of the above topics may not be covered if the same material is covered in other required courses.
Prerequisites: None. Corequisites: None. (S)

BUS 125 Personal Finance **3 0 0 3**
This course provides a study of individual and family financial decisions. Emphasis is placed on building useful skills in buying, managing finances, increasing resources, and coping with current economic conditions. Upon completion, students should be able to develop a personal financial plan.
Prerequisites: None. Corequisites: None. (On demand)

BUS 137 Principles of Management (Coll/Tran) **3 0 0 3**
This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management.
Prerequisites: None. Corequisites: None. (F)

BUS 139 Entrepreneurship I **3 0 0 3**
This course provides an introduction to the principles of entrepreneurship. Topics include self-analysis of entrepreneurship readiness, the role of entrepreneur in economic development, legal problems, organizational structure, sources of financing, budgeting, and cash flow. Upon completion, students should have an understanding of the entrepreneurial process and issues faced by entrepreneurs.
Prerequisites: None. Corequisites: None. (F)

BUS 153 Human Resource Management **3 0 0 3**
This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns.
Prerequisites: None. Corequisites: None. (On demand)

BUS 225 Business Finance **2 2 0 3**
This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management.
Prerequisites: ACC 120. Corequisites: None. (F)

BUS 230 Small Business Management **3 0 0 3**
This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan.
Prerequisites: None. Corequisites: None. (On demand)

BUS 238 Integrated Management **3 0 0 3**
This course provides a management simulation exercise in which students make critical managerial decisions based upon the situations that arise in operating competitive business enterprises. Topics include operations management, forecasting, budgeting, purchasing, facility layout, aggregate planning, and work improvement techniques. Upon completion, students should be able to perform the variety of analytical and decision-making requirements that will be faced in a business.
Prerequisites: BUS 137. Corequisites: None. (S)

BUS 240 Business Ethics **3 0 0 3**
This course introduces contemporary and controversial ethical issues that face the business community. Topics include moral reasoning, moral dilemmas, law and morality, equity, justice and fairness, ethical standards, and moral development. Upon completion, students should be able to demonstrate an understanding of their moral responsibilities and obligations as members of the workforce and society.
Prerequisites: None. Corequisites: None. (S)

BUS 245 Entrepreneurship II **3 0 0 3**
This course is designed to allow the student to develop a business plan. Topics include the need for a business plan, sections of the plan, writing the plan, and how to find assistance in preparing the plan. Upon completion, students should be able to design and implement a business plan based on sound entrepreneurship principles.
Prerequisites: BUS 139. Corequisites: None. (S)

BUS   253   Leadership and Mgt Skills   3 0 0 3
This course includes a study of the qualities, behaviors, and personal styles exhibited by leaders. Emphasis is placed on coaching, counseling, team building, and employee involvement. Upon completion, students should be able to identify and exhibit the behaviors needed for organizational effectiveness. Prerequisites: None. Corequisites: None. (S)

BUS   260   Business Communication   3 0 0 3
This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place.
Prerequisites: ENG 111. Corequisites: None. (F)

BUS   285   Business Management Issues   2 2 0 3
This course covers contemporary issues that affect successful businesses and their managers and employees. Emphasis is placed on using case studies and exercises to develop analytical and problem-solving skills, ethics, quality management concepts, team skills, and effective communication. Upon completion, students should be able to apply the specific knowledge and skills covered to become more effective managers and employees.
Prerequisites: BUS 137. Corequisites: None.

CYBER CRIME

CCT   110   Intro to Cyber Crime   3 0 0 3
This course introduces and explains the various types of offenses that qualify as cyber crime activity. Emphasis is placed on identifying cyber crime activity and the response to these problems from both the private and public domains. Upon completion, students should be able to accurately describe and define cyber crime activities and select an appropriate response to deal with the problem. Students will demonstrate their proficiency with the use of computer technology and applications, such as Microsoft Word, Excel, and Power point.
Prerequisites: None. Corequisites: None. (F)

CCT   112   Ethics & High Technology   3 0 0 3
This course covers ethical considerations and accepted standard practices applicable to technological investigations and computer privacy issues relative to the cyber crime investigator. Topics include illegal and unethical investigative activities, end-justifying-the-means issues, and privacy issues of massive personal database information gathered by governmental sources. Upon completion, students should be able to examine their own value system and apply ethical considerations in identifiable cyber crime investigations.
Prerequisites: None. Corequisites: None. (F)

CCT   121   Computer Crime Invest   3 2 0 4
This course introduces the fundamental principles of computer crime investigation processes. Topics include crime scene/incident processing, information gathering techniques, data retrieval, collection and preservation of evidence, preparation of reports and court presentations. Upon completion, students should be able to identify cyber crime activity and demonstrate proper investigative techniques to process the scene and assist in case prosecution.
Prerequisites: None. Corequisites: None. (S)

CCT   231   Technology Crimes & Law   3 0 0 3
This course covers the applicable technological laws dealing with the regulation of cyber security and criminal activity. Topics include an examination of state, federal and international laws regarding cyber crime with an emphasis on both general and North Carolina statutes. Upon completion, students should be able to identify the elements of cyber crime activity and discuss the trends evolving laws.
Prerequisites: None. Corequisites: None. (F)

CCT   240   Data Recovery Techniques   2 3 0 3
This course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes. Topics include hardware and software issues, recovering erased files, overcoming encryption, advanced imaging, transient data, Internet issues and testimony considerations. Upon completion, students should be able to recover digital evidence, extract information for criminal investigation and legally seize criminal evidence.
Prerequisites: CCT 121, NOS 110. Corequisites: None. (F)

CCT   250   Netwk Vulnerabilities I   2 2 0 3
This course introduces students to penetration testing, network vulnerabilities, and hacking. Topics include an overview of traditional network security, system hardening, and known weaknesses. Upon completion, students should be able to evaluate weaknesses of traditional and wireless networks for the purpose of incident response, reconstruction, and forensic investigation. Additionally, students will be able to assess and secure common network vulnerabilities.
Prerequisites: NET 110. Corequisites: None. (F)

CCT   285   Trends in Cyber Crime   2 2 0 3
This course covers and explores advances and developments in cyber crime technologies. Emphasis is placed on computer forensics tools, information protection and security, threat response, and professional development. Upon completion, students should be able to articulate understanding of the current state of the industry as well as emerging technologies for cyber crime technology. Students will be able to identify the regulatory and legal environment encountered in common business environments and develop risk assessments based on those regulations.
Prerequisites: CCT 110. Corequisites: None. (S)

CCT   289   Capstone Project   1 6 0 3
This course provides experience in cyber crime investigations or technology security audits in either the public or private domain. Emphasis is placed on student involvement with businesses or agencies dealing with technology security issues or computer crime activities. Upon completion, students should be able to successfully analyze, retrieve erased evidence and testify in mock proceedings against these criminal entrepreneurs. Students will be able to evaluate and identify risk mitigation strategies and prepare plans for business security and/or continuity.
Prerequisites: CCT 231 **or** CCT 220. Corequisites: None. (S)

COMPUTER ENGINEERING TECHNOLOGY

CET   111   Computer Upgrade/Repair I   2 3 0 3
This course covers repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics include CPU/memory/bus identification, disk subsystems, hardware/software installation/configuration, common device drivers, data recovery, system maintenance, and other related topics. Upon completion, students should be able to safely repair and/or upgrade computer systems to perform within specifications.
Prerequisites: CIS 110; RED 080 **or** appropriate placement test score.
Corequisites: None. (On demand)

CET   211   Computer Upgrade/Repair II   2 3 0 3
This course covers concepts of repair, service, and upgrade of computers and peripherals in preparation for industry certification. Topics may include resolving resource conflicts and system bus specifications, configuration and troubleshooting peripherals, operating system configuration and optimization, and other related topics. Upon completion, students should be able to identify and resolve system conflicts and optimize system performance.
Prerequisites: CET 111 **or** CTS 120; RED 080 **or** appropriate placement test score. Corequisites: None. (On demand)

CHINESE

CHI   111   Elementary Chinese I (Coll/Tran)   **3 0 0 3**
This course introduces the fundamental elements of the Chinese language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Chinese and demonstrate cultural awareness.
Prerequisites: None. Corequisites: CHI 181. (On demand)

CHI   112   Elementary Chinese II (Coll/Tran)   **3 0 0 3**
This course includes the basic fundamentals of the Chinese language within a cultural context of the Chinese people and its history. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Chinese and demonstrate further cultural awareness.
Prerequisites: CHI 111 must pass with a grade of "C" or higher.
Corequisites: CHI 182. (On demand)

CHI 181 Chinese Lab I (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the Chinese 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 Chinese and demonstrate cultural awareness. Prerequisites: None. Corequisites: CHI 111. (On demand)

CHI 182 Chinese Lab II (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the Chinese 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 Chinese and demonstrate cultural awareness. Prerequisites: CHI 181 must pass with a grade of "C" or higher. Corequisites: CHI 112. (On demand)

CHEMISTRY

CHM 130 Gen, Org, & Biochemistry (Coll/Tran)   **3 0 0 3**
This course provides a survey of basic facts and principles of general, organic, and biochemistry. Topics include measurement, molecular structure, nuclear chemistry, solutions, acid-base chemistry, gas laws, and the structure, properties, and reactions of major organic and biological groups. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** appropriate placement test scores; RED 090 **or** appropriate placement test scores. Corequisites: CHM 130A. (F,S,On demand)

CHM 130A Gen, Org, & Biochemistry Lab (Coll/Tran)   **0 2 0 1**
This course is a laboratory for CHM 130. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 130. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 130.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** appropriate placement test scores; RED 090 **or** appropriate placement test scores. Corequisites: CHM 130. (F,S,On demand)

CHM 131 Introduction to Chemistry (Coll/Tran)   **3 0 0 3**
This course introduces the fundamental concepts of inorganic chemistry. Topics include measurement, matter and energy, atomic and molecular structure, nuclear chemistry, stoichiometry, chemical formulas and reactions, chemical bonding, gas laws, solutions, and acids and bases. Upon completion, students should be able to demonstrate a basic understanding of chemistry as it applies to other fields.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** appropriate placement test scores; RED 090 **or** appropriate placement test scores. Corequisites: CHM 131A. (F,S)

CHM 131A Introduction to Chemistry Lab (Coll/Tran)   **0 3 0 1**
This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** appropriate placement test scores;. Corequisites: CHM 131. (F,S)

CHM 132 Organic and Biochemistry (Coll/Tran)   **3 3 0 4**
This course provides a survey of major functional classes of compounds in organic and biochemistry. Topics include structure, properties, and reactions of the major organic and biological molecules and basic principles of metabolism. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts needed to pursue studies in related professional fields.
Prerequisites: CHM 131 **and** CHM 131A (must pass with a grade of "C" or higher); **or** CHM 151 must pass with a grade of "C" or higher. Corequisites: None. (S)

CHM 151 General Chemistry I (Coll/Tran)   **3 3 0 4**
This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152. Successful completion of high school chemistry (C), or a higher level chemistry course is recommended prior to taking CHM 151.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 080 **or** appropriate placement test scores; RED 090 **or** appropriate placement test scores. Corequisites: None. (F,S,On demand)

CHM 152 General Chemistry II (Coll/Tran)   **3 3 0 4**
This course provides a continuation of the study of the fundamental principles and laws of chemistry. Topics include kinetics, equilibrium, ionic and redox equations, acid-base theory, electrochemistry, thermodynamics, introduction to nuclear and organic chemistry, and complex ions. Upon completion, students should be able to demonstrate an understanding of chemical concepts as needed to pursue further study in chemistry and related professional fields.
Prerequisites: CHM 151 must pass with a grade of "C" or higher. Corequisites: MAT 161 or higher. (F,S)

CHM 251 Organic Chemistry I (Coll/Tran)   **3 3 0 4**
This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252.
Prerequisites: CHM 152 must pass with a grade of "C" or higher. Corequisites: None. (F)

CHM 252 Organic Chemistry II (Coll/Tran)   **3 3 0 4**
This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields.
Prerequisites: CHM 251 must pass with a grade of "C" or higher. Corequisites: None. (S)

CHM 261 Quantitative Analysis (Coll/Tran)   **2 6 0 4**
This course introduces classical methods of chemical analysis with an emphasis on laboratory techniques. Topics include statistical data treatment; stoichiometric and equilibrium calculations; and titrimetric, gravimetric, acid-base, oxidation-reduction, and compleximetric methods. Upon completion, students should be able to perform classical quantitative analytical procedures.
Prerequisites: CHM 152. Corequisites: None. (On demand)

CHM 263 Analytical Chemistry (Coll/Tran)   **3 4 0 5**
This course covers the knowledge and laboratory skills needed to perform chemical analysis. Emphasis is placed on developing laboratory techniques used in the separation, identification, and quantification of selected substances. Upon completion, students should be able to perform laboratory techniques employed in substance identification and volumetric analysis and interpret the results.
Prerequisites: CHM 132. Corequisites: None. (On demand)

CHM 271 Biochemical Principles (Coll/Tran)   **3 0 0 3**
The course covers fundamental principles of biochemistry. Topics include structures, properties, reactions, and mechanisms of biomacromolecules including amino acids, peptides, proteins, carbohydrates and nucleic acids, enzymatic metabolic pathways, and biochemical genetics. Upon completion, students should be able to demonstrate an understanding of fundamental biochemical processes.
Prerequisites: CHM 252. Corequisites: None. (On demand)

CHM 271A Biochemical Principles Laboratory (Coll/Tran) **0 3 0 1**
This course is a laboratory for CHM 271. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 271. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 271.
Prerequisites: CHM 252. Corequisites: CHM 271. (On demand)

INFORMATION SYSTEMS

CIS 110 Introduction to Computers (Coll/Tran) **2 2 0 3**
This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems.
Prerequisites: CTS 080; RED 080 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

CIS 111 Basic PC Literacy **1 2 0 2**
This course provides an overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal and fundamental workplace use. Upon completion, students should be able to demonstrate basic personal computer skills.
Prerequisites: CTS 080; RED 080; **or** appropriate test scores.
Corequisites: None. (F,S)

CIS 115 Intro to Prog & Logic (Coll/Tran) **2 3 0 3**
This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** MAT 121 **or** MAT 161 **or** MAT 171 **or** MAT 175 **or** appropriate placement test score. Corequisites: None. (F)

CIS 277 Network Design & Imp **2 2 0 3**
This course focuses on the design, analysis, and integration of network operating system. Topics include determination of a directory tree structure and object placement, creation of time synchronization strategy, security, and routing services. Upon completion, students should be able to implement a network design strategy, develop a migration strategy, and create a network imple–mentation schedule.
Prerequisites: None. Corequisites: None. (S)

CIVIL ENGINEERING

CIV 230 Construction Estimating **2 3 0 3**
This course covers quantity take-offs of labor, materials, and equipment and calculation of direct and overhead costs for a construction project. Topics include the interpretation of working drawings and specifications, types of contracts and estimates, building codes, bidding techniques and procedures, and estimating software. Upon completion, students should be able to prepare a detailed cost estimate and bid documents for a construction project.
Prerequisites: ARC 111; **and** CIS 110 **or** CIS 111.   Corequisites: None. (F)

CRIMINAL JUSTICE

CJC 100 Basic Law Enforcement Training **9 30 0 19**
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specifc. Upon successful completion, the student will be able to demonstrate competence in topics and areas required for the state comprehensive certification examination. This is a certificate-level course.
Prerequisites: Completion of admission process for BLET.
Corequisites: None. (F,S)

CJC 111 Intro to Criminal Justice (Coll/Tran) **3 0 0 3**
This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options.
Prerequisites: None. Corequisites: None. (F)

CJC 112 Criminology **3 0 0 3**
This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response.
Prerequisites: None. Corequisites: None. (S)

CJC 113 Juvenile Justice **3 0 0 3**
This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition.
Prerequisites: None. Corequisites: None. (F)

CJC 114 Investigative Photography **1 2 0 2**
This course covers the operation of digital photographic equipment and its application to criminal justice. Topics include the use of digital cameras, storage of digital images, the retrieval of digital images and preparation of digital images as evidence. Upon completion, students should be able to demonstrate and explain the role and use of digital photography, image storage and retrieval in criminal investigations.
Prerequisites: None. Corequisites: None. (F)

CJC 121 Law Enforcement Operations (Coll/Tran) **3 0 0 3**
This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations.
Prerequisites: None. Corequisites: None. (S)

CJC 131 Criminal Law **3 0 0 3**
This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements.
Prerequisites: None. Corequisites: None. (F)

CJC 132 Court Procedure & Evidence **3 0 0 3**
This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence.
Prerequisites: None. Corequisites: None. (F)

CJC 141   Corrections (Coll/Tran)   **3 0 0 3**
This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system.
Prerequisites: None. Corequisites: None. (S)

CJC 144   Crime Scene Processing   **2 3 0 3**
This course introduces the theories and practices of crime scene processing and investigating. Topics include legal considerations at the crime scene, processing indoor and outdoor scenes, recording, note taking, collection and preservation of evidence and submission to the crime laboratory. Upon completion, the student should be able to evaluate and search various crime scenes and demonstrate the appropriate techniques.
Prerequisites: None. Corequisites: None. (S)

CJC 146   Trace Evidence   **2 3 0 3**
This course provides a study of trace evidence as it relates to forensic science. Topics include collection, packaging, and preservation of trace evidence from crime scenes such as bombings, fires and other scenes. Upon completion, students should be able to demonstrate the fundamental concepts of trace evidence collection, preservation and submission to the crime laboratory.
Prerequisites: None. Corequisites: None. (F)

CJC 151   Intro to Loss Prevention   **3 0 0 3**
This course introduces the concepts and methods related to commercial and private security systems. Topics include the historical, philosophical, and legal basis of security, with emphasis on security surveys, risk analysis, and associated functions. Upon completion, students should be able to demonstrate and understand security systems, risk management, and the laws relative to loss prevention.
Prerequisites: None. Corequisites: None. (S)

CJC 160   Terrorism: Underlying Issues   **3 0 0 3**
This course identifies the fundamental reasons why America is a target for terrorists, covering various domestic/international terrorist groups and ideologies from a historical aspect. Emphasis is placed upon recognition of terrorist crime scene; weapons of mass destruction; chemical, biological, and nuclear terrorism; and planning consideration involving threat assessments. Upon completion, the student should be able to identify and discuss the methods used in terrorists' activities and complete a threat assessment for terrorists' incidents.
Prerequisites: None. Corequisites: None. (F)

CJC 212   Ethics & Comm Relations   **3 0 0 3**
This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations.
Prerequisites: None. Corequisites: None. (S)

CJC 215   Organization & Administration   **3 0 0 3**
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.
Prerequisites: None. Corequisites: None. (F)

CJC 221   Investigative Principles   **3 2 0 4**
This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.
Prerequisites: None. Corequisites: None. (S)

CJC 222   Criminalistics   **3 0 0 3**
This course covers the functions of the forensic laboratory and its relationship to successful criminal investigations and prosecutions. Topics include advanced crime scene processing, investigative techniques, current forensic technologies, and other related topics. Upon completion, students should be able to identify and collect relevant evidence at simulated crime scenes and request appropriate laboratory analysis of submitted evidence.
Prerequisites: None. Corequisites: None. (S)

CJC 225   Crisis Intervention   **3 0 0 3**
This course introduces critical incident intervention and management techniques as they apply to operational criminal justice practitioners. Emphasis is placed on the victim/offender situation as well as job-related high stress, dangerous, or problem-solving citizen contacts. Upon completion, students should be able to provide insightful analysis of emotional, violent, drug-induced, and other critical and/or stressful incidents that require field analysis and/or resolution.
Prerequisites: None. Corequisites: None. (S)

CJC 231   Constitutional Law   **3 0 0 3**
The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.
Prerequisites: None. Corequisites: None. (F)

CJC 245   Friction Ridge Analysis   **2 3 0 3**
This course introduces the basic elements of fingerprint technology and techniques applicable to the criminal justice field. Topics include the history and meaning of fingerprints, pattern types and classification, filing sequence, searching and referencing. Upon completion, students should be able to discuss and demonstrate the fundamental techniques of basic fingerprint technology.
Prerequisites: None. Corequisites: None. (F)

CJC 246   Adv Friction Ridge Analys   **2 3 0 3**
This course introduces the theories and processes of advanced friction ridge analysis. Topics include evaluation of friction ridges, chart preparation, comparative analysis for valued determination rendering proper identification, chemical enhancement and AFIS preparation and usage. Upon completion, students must show an understanding of proper procedures for friction ridge analysis through written testing and practical exercises.
Prerequisites: CJC 245. Corequisites: None. (S)

CJC 250   Forensic Biology I   **2 2 0 3**
This course covers important biological principles that are applied in the crime laboratory. Topics include forensic toxicology, forensic serology, microscopy, and DNA typing analysis, with an overview of organic and inorganic analysis. Upon completion, students should be able to articulate how a crime laboratory processes physical evidence submitted by law enforcement agencies.
Prerequisites: None. Corequisites: None. (S)

CJC 251   Forensic Chemistry I   **3 2 0 4**
This course provides a study of the fundamental concepts of chemistry as it relates to forensic science. Topics include physical and chemical properties of substances, metric measurements, chemical changes, elements, compounds, gases, and atomic structure. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of forensic chemistry.
Prerequisites: None. Corequisites: None. (S)

COOPERATIVE EDUCATION

• Specific programs may require additional prerequisites and/or corequisites for cooperative education courses. Please see your advisor.

COE 110   World of Work   1 0 0 1
This course covers basic knowledge necessary for gaining and maintaining employment. Topics include job search skills, work ethic, meeting employer expectations, workplace safety, and human relations. Upon completion, students should be able to successfully make the transition from school to work. Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (On demand)

COE 111   Co-op Work Experience I   0 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. Prerequisites: None. Corequisites: None. (F,S,SU)

COE 112   Co-op Work Experience I   0 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. Prerequisites: None. Corequisites: None. (F,S,SU)

COE 113   Co-op Work Experience I   0 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. Prerequisites: None. Corequisites: None. (F,S,SU)

COE 114   Co-op Work Experience I   0 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 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. Prerequisites: None. Corequisites: None. (F,S,SU)

COE 115   Work Exp Seminar I   1 0 0 1
This course provides information for career development through emphasis on self-exploration and awareness of the world of work. Upon completion, students are capable of career decision making and planning. Prerequisites: None. Corequisites: COE 111 **or** COE 112 **or** COE 113 **or** COE 114. (F,S,SU)

COE 121   Co-op Work Experience II   0 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. Prerequisites: COE 111 **or** COE 112 **or** COE 113 **or** COE 114. Corequisites: None. (F,S,SU)

COE 122   Co-op Work Experience II   0 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. Prerequisites: COE 111 **or** COE 112 **or** COE 113 **or** COE 114. Corequisites: None. (F,S,SU)

COE 123   Co-op Work Experience II   0 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. Prerequisites: COE 111 **or** COE 112 **or** COE 113 **or** COE 114. Corequisites: None. (F,S,SU)

COE 124   Co-op Work Experience II   0 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 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. Prerequisites: COE 111 **or** COE 112 **or** COE 113 **or** COE 114. Corequisites: None. (F,S,SU)

COE 125   Work Exp Seminar II   1 0 0 1
This course provides information for career development through emphasis on self-exploration and awareness of the world of work. Upon completion, students are capable of career decision making and planning. Prerequisites: COE 115. Corequisites: COE 121 **or** COE 122 **or** COE 123 **or** COE 124. (F,S,SU)

COE 131   Co-op Work Experience III   0 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. Prerequisites: Select one (1) required course from, COE 111, COE 112, COE 113, COE 114; **and** Select one (1) required course f rom, COE 121, COE 122, COE 123, COE 124. Corequisites: None. (F,S,SU)

COE 132   Co-op Work Experience III   0 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. Prerequisites: Select one (1) required course from, COE 111, COE 112, COE 113, COE 114; **and** Select one (1) required course from, COE 121, COE 122, COE 123, COE 124. Corequisites: None. (F,S,SU)

COE 133   Co-op Work Experience III   0 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. Prerequisites: None. Corequisites: None. (On demand)

COE 134   Co-op Work Experience III   0 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 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. Prerequisites: None. Corequisites: None. (On demand)

COE 135   Work Exp Seminar III   1 0 0 1
This course provides information for career development through emphasis on self-exploration and awareness of the world of work. Upon completion, students are capable of career decision making and planning. Prerequisites: COE 115, COE 125. Corequisites: COE 131 **or** COE 132. (F,S,SU)

COE 211   Co-op Work Experience IV   0 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.
Prerequisites: Select one (1) required course from, COE 111, COE 112, COE 113, COE 114, **and** Select one (1) required required course from, COE 121, COE 122, COE 123, COE 124; and COE 131 **or** COE 132. Corequisites: None. (F,S,SU)

COE 212   Co-op Work Experience IV   0 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.
Prerequisites: Select one (1) required course from, COE 111, COE 112, COE 113, COE 114, **and** Select one (1) required course from, COE 121, COE 122, COE 123, COE 124; and COE 131 **or** COE 132. Corequisites: None. (F,S,SU)

COE 213   Co-op Work Experience IV   0 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 214   Co-op Work Experience IV   0 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 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 221   Co-op Work Experience V   0 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 222   Co-op Work Experience V   0 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 223   Co-op Work Experience V   0 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 224   Co-op Work Experience V   0 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 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 231   Co-op Work Experience VI   0 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 232   Co-op Work Experience VI   0 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 233   Co-op Work Experience VI   0 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.
Prerequisites: None. Corequisites: None. (On demand)

COE 234   Co-op Work Experience VI   0 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 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.
Prerequisites: None. Corequisites: None. (On demand)

COMMUNICATION

COM 110   Introduction to Communication (Coll/Tran)   **3 0 0 3**
This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal group, public, intercultural, and mass communication situations. Upon completion, students should be able to explain and illustrate the forms and purposes of human communication in a variety of contexts.
Prerequisites: None. Corequisites: ENG 111. (F,S,SU)

COM 120   Intro Interpersonal Com (Coll/Tran)   **3 0 0 3**
This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations.
Prerequisites: None. Corequisites: None. (On demand)

COM 231   Public Speaking (Coll/Tran)   **3 0 0 3**
This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support.
Prerequisites: None. Corequisites: ENG 111. (S)

COSMETOLOGY

COS 111   Cosmetology Concepts I   4 0 0 4
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.
Prerequisite: None. Corequisite: COS 112. (F)

COS 111AB Cosmetology Concepts I-AB   2 0 0 2
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.
Prerequisite: None. Corequisite: COS 112AB. (F)

COS 111BB Cosmetology Concepts I-BB   2 0 0 2
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.
Prerequisites: None. Corequisities: COS 112BB. (S)

COS 112   Salon I   0 24 0 8
This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.
Prerequisites: None. Corequisites: COS 111. (S)

COS 112AB Salon I-AB   0 12 0 4
This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.
Prerequisites: None. Corequisites: COS 111AB. (F)

COS 112BB Salon I-BB   0 12 0 4
This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.
Prerequisites: None. Corequisites: COS 111BB. (S)

COS 113   Cosmetology Concepts II   4 0 0 4
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Prerequisites: None. Corequisites: COS 114, ENG 102. (S)

COS 113AB Cosmetology Concepts II-AB   2 0 0 2
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Prerequisites: ENG 102, PSY 150. Corequisities: COS 114AB. (F)

COS 113BB Cosmetology Concepts II-BB   2 0 0 2
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Prerequisites: None. Corequisities: COS 114BB. (S)

COS 114   Salon II   0 24 0 8
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.
Prerequisites: None. Corequisites: COS 113, ENG 102. (S)

COS 114AB Salon II-AB   0 12 0 4
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.
Prerequisites: ENG 102, PSY 150. Corequisites: COS 113AB. (F)

COS 114BB Salon II-BB   0 12 0 4
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.
Prerequisites: None. Corequisites: COS 113BB. (S)

COS 115   Cosmetology Concepts III   4 0 0 4
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Prerequisites: None. Corequisites: COS 116. (SU)

COS 115AB Cosmetology Concepts III-AB   2 0 0 2
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Prerequisites: None. Corequisites: COS 116AB. (F)

COS 115BB Cosmetology Concepts III-BB   2 0 0 2
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Prerequisites: None. Corequisites: COS 116BB. (S)

COS 116   Salon III   0 12 0 4
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.
Prerequisites: None. Corequisites: COS 115. (SU)

COS 116AB Salon III-AB   0 6 0 2
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon servcies.
Prerequisites: None. Corequisites: COS 115AB. (F)

COS 116BB Salon III-BB   0 6 0 2
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topis. Upon completion, students should be able to safely and competently demonstrate these salon services.
Prerequisites: None. Corequisites: COS 115BB. (S)

COS 117   Cosmetology Concepts IV   2 0 0 2
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.
Prerequisites: None. Corequisites: COS 118 and PSY 150. (F)

COS 117AB Cosmetology Concepts IV-AB   1 0 0 1
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.
Prerequisites: None. Corequisites: COS 118AB. (F)

COS 117BB   Cosmetology Concepts IV-BB   1 0 0 1

This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.
Prerequisites: None. Corequisites: COS 118BB. (S)

COS 118   Salon IV   0 21 0 7

This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.
Prerequisites: COS 114, COS 116. Corequisites: COS 117. (F)

COS 118AB   Salon IV-AB   0 12 0 4

This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.
Prerequisites: None. Corequisites: COS 117AB. (F)

COS 118BB   Salon IV-BB   0 9 0 3

This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.
Prerequisites: None. Corequisites: COS 117BB. (S)

COMPUTER SCIENCE

CSC 120   Computing Fundamentals I (Coll/Tran)   **3 2 0 4**

This course provides the essential foundation for the discipline of computing and a program of study in computer science, including the role of the professional. Topics include algorithm design, data abstraction, searching and sorting algorithms, and procedural programming techniques. Upon completion, students should be able to solve problems, develop algorithms, specify data types, perform sorts and searches, and use an operating system.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080, **or** MAT 121 **or** MAT 161 **or** MAT 171 **or** MAT 175 **or** appropriate placement test score.Corequisites: None. (F,S)

CSC 130   Computing Fundamentals II (Coll/Tran)   **3 2 0 4**

This course provides in-depth coverage of the discipline of computing and the role of the professional. Topics include software design methodologies, analysis of algorithm and data structures, searching and sorting algorithms, and file organization methods. Upon completion, students should be able to use software design methodologies and choice of data structures and understand social/ethical responsibilities of the computing professional.
Prerequisites: CSC 120. Corequisites: None. (S)

CSC 134   C++ Programming (Coll/Tran)   **2 3 0 3**

This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** appropriate placement test score. Corequisites: None. (F,S)

CSC 138   RPG Programming   2 3 0 3

This course introduces computer programming using the RPG programming language with structured programming principles. Topics include input/output operations, iteration, arithmetic operations, arrays, pointers, filters, and other related topics. Upon completion, students should be able to design, code, test and debug at a beginning level.
Prerequisites: None. Corequisites: None. (F)

CSC 139   Visual BASIC Prog (Coll/Tran)   **2 3 0 3**

This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.
Prerequisites: None. Corequisites: None. (S)

CSC 141   Visual C++ Prog   2 3 0 3

This course introduces computer programming using the Visual C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment at a beginning level.
Prerequisites: None. Corequisites: None. (S)

CSC 151   JAVA Programming (Coll/Tran)   **2 3 0 3**

This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** appropriate placement test score. Corequisites: None. (On demand)

CSC 220   Machine Implem of Algor (Coll/Tran)   **3 2 0 4**

This course covers the organization and operation of real computer systems at the assembly language level. Topics include mapping of statements and constructs onto machine instruction sequences, internal data types and structures representation, numerical computation, and iterative approximation methods. Upon completion, students should be able to analyze computer system organization, implement procedural language elements, and describe the programming language translation process.
Prerequisites: CSC 120. Corequisites: MAT 271. (On demand)

CSC 234   Adv C++ Programming   2 3 0 3

This course is a continuation of CSC 134 using the C++ programming language with standard programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.
Prerequisites: CSC 134. Corequisites: None. (On demand)

CSC 238   Adv RPG Programming   2 3 0 3

This course is a continuation of CSC 138 using the RPG programming language 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.
Prerequisites: CSC 138. Corequisites: None. (S)

CSC 239   Adv Visual BASIC Prog (Coll/Tran)   **2 3 0 3**

This course is a continuation of CSC 139 using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.
Prerequisites: CSC 139. Corequisites: None. (S)

CSC 289   Programming Capstone Project   1 4 0 3

This course provides an opportunity to complete a significant programming project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. Upon completion, students should be able to complete a project from the definition phase through implementation.
Prerequisites: CTS 285. Corequisites: None.

COMPUTER INFORMATION TECHNOLOGY

CTS 080 Computing Fundamentals 2 3 0 3
This course covers fundamental functions and operations of the computer. Topics include identification of components and basic computer operations including introduction to operating systems, the Internet, web browsers, and communication using World Wide Web. Upon completion, students should be able to operate computers, access files, print documents and perform basic applications operations.
Prerequisites: None. Corequisites: None. (F,S)

CTS 115 Info Sys Business Concept 3 0 0 3
This course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems.
Prerequisites: None. Corequisites: None. (S)

CTS 120 Hardware/Software Support 2 3 0 3
This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.
Prerequisites: CIS 110 **or** CIS 111. Corequisites: None. (F,S)

CTS 130 Spreadsheet 2 2 0 3
This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.
Prerequisites: CIS 110 **or** CIS 111 **or** OST 137. Corequisites: None. (F)

CTS 210 Computer Ethics 3 0 0 3
This course introduces the student to current legal and ethical issues in the computer/engineering field. Topics include moral reasoning, ethical standards, intellectual property, social issues, encryption, software piracy, constitutional issues, and public policy in related matters. Upon completion, students should be able to demonstrate an understanding of the moral and social responsibilities and public policy issues facing an industry.
Prerequisites: CIS 110 **or** CIS 111 **or** NET 110. Corequisites: None. S)

CTS 285 Systems Analysis & Design 3 0 0 3
This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques.
Prerequisites: CIS 115. Corequisites: None. (F)

CTS 286 Network Support 2 2 0 3
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.
Prerequisites: NOS 230 **or** NOS 231. Corequisites: None. (S)

CTS 289 System Support Project 1 4 0 3
This course provides an opportunity to complete a significant support project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a project from the definition phase through implementation.
Prerequisites: CTS 285. Corequisites: None. (S)

DATABASE MANAGEMENT TECHNOLOGY

DBA 110 Database Concepts 2 3 0 3
This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables , queries, reports, and forms.
Prerequisites: None. Corequisites: None. (F)

DBA 115 Database Applications 2 2 0 3
This course applies concepts learned in DBA 110 to a specific DBMS. Topics include manipulating multiple tables, advanced queries, screens and reports, linking, and command files. Upon completion, students should be able to create multiple table systems that demonstrate updates, screens, and reports representative of industry requirements.
Prerequisites: DBA 110. Corequisites: None. (S)

DBA 120 Database Programming I 2 2 0 3
This course is designed to develop SQL programming proficiency. Emphasis is placed on data definition, data manipulation, and data control statements as well as on report generation. Upon completion, students should be able to write programs which create, update, and produce reports.
Prerequisites: DBA 115. Corequisites: None. (F)

DBA 220 Oracle DB Programming II 2 2 0 3
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop an Oracle DBMS application which includes a GUI front-end and report generation.
Prerequisites: DBA 120. Corequisites: None

DANCE

DAN 110 Dance Appreciation (Coll/Tran) **3 0 0 3**
This course for non-dance majors surveys diverse dance forms and the religious and cultural values that shape them. Topics include dances from Europe, Africa, Asia, and America. Upon completion, students should be able to demonstrate an understanding of the diverse forms and values that dance embraces.
Prerequisites: None. Corequisites: None. (On demand)

DAN 124 Jazz Dance I 0 3 0 1
This course provides the fundamentals of elementary jazz technique. Emphasis is placed on body placement, stretching, jazz movements, and syncopated rhythms. Upon completion, students should be able to demonstrate significant progress in fundamental jazz dance technique and simple center combinations.
Prerequisites: None. Corequisites: None. (On demand)

DAN 125 Jazz Dance II 0 3 0 1
This course is the second in a series and provides an expansion of elementary/intermediate jazz dance. Emphasis is placed on "Cool Jazz," theatrical jazz styles, and extended sequences of movement (routines). Upon completion, students should be able to demonstrate moderate mastery of elementary/intermediate-level jazz dance and be able to perform routines.
Prerequisites: DAN 124. Corequisites: None. (On demand)

DAN 130 Ballet I 0 4 0 2
This course introduces the elementary elements of ballet technique. Emphasis is placed on simple positions, body placement, classroom discipline, and the Dalcroze method of counting music. Upon completion, students should be able to recognize the names and rhythms of basic steps and be able to perform those movements at barre and in center.
Prerequisites: None. Corequisites: None. (On demand)

DAN 140 Modern Dance I 0 4 0 2
This course introduces the elementary elements of modern dance technique. Emphasis is placed on floor, barre, and center floor exercises. Upon completion, students should be able to exhibit a basic understanding and skill in performing elementary modern dance technique.
Prerequisites: None. Corequisites: None. (On demand)

DAN 141   Modern Dance II   0 4 0 2
This course is the second in a series of elementary modern dance technique. Emphasis is placed on motor skill development and simple combinations in center floor. Upon completion, students should be able to exhibit moderate technical skill in elementary modern dance technique.
Prerequisites: None. Corequisites: None. (On demand)

DAN 211   Dance History I (Coll/Tran)   **3 0 0 3**
This course provides an in-depth study of world dance from pre-history to 1800. Emphasis is placed on examining the dance and dancers of diverse cultures including Africa, Asia, and Europe. Upon completion, students should be able to analyze the common need to dance and the forms, religions, and cultural values it embodies.
Prerequisites: None. Corequisites: None. (On demand)

DAN 212   Dance History II (Coll/Tran)   **3 0 0 3**
This course provides an in-depth study of world dance from 1800 to the present. Emphasis is placed on Western theatrical dance (ballet, modern dance, tap, and jazz) and the personalities that shaped it. Upon completion, students should be able to analyze culturally diverse dance forms and their cross-pollenation which have produced the "pan world dance of today."
Prerequisite: None. Corequisites: None. (On demand)

DAN 225   Choreography I   1 4 0 3
This course introduces the fundamental techniques of modern dance choreography. Emphasis is placed on improvisation and development of movement phrases. Upon completion, students should be able to create simple movements, improvise upon them, and develop longer movement phrases to create short dances.
Prerequisites: DAN 140. Corequisites: None. (On demand)

DAN 264   Dance Production   0 9 0 3
This course covers creation, rehearsal, and performance, before a live audience, of a new or reconstructed work by faculty, guest artist, or repertory. Emphasis is placed on movement, memory skills, role development, accepted professional behavior, and ability to project the choreographer's intent. Upon completion, students should be able to demonstrate through performance a basic knowledge of the artistic and technical aspects of performing before a live audience.
Prerequisites: None. Corequisites: None. (On demand)

DENTAL HYGIENE

DEN 110   Orofacial Anatomy   2 2 0 3
This course introduces the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to relate the identification of normal structures and development to the practice of dental assisting and dental hygiene.
Prerequisites: Enrollment in the Dental Hygiene program. Corequisites: None. (F)

DEN 111   Infection/Hazard Control   2 0 0 2
This course introduces the infection and hazard control procedures necessary for the safe practice of dentistry. Topics include microbiology, practical infection control, sterilization and monitoring, chemical disinfectants, aseptic technique, infectious diseases, OSHA standards, and applicable North Carolina laws. Upon completion, students should be able to understand infectious diseases, disease transmission, infection control procedures, biohazard management, OSHA standards, and applicable North Carolina laws.
Prerequisites: Enrollment in the Dental Hygiene program. Corequisites: None. (F)

DEN 112   Dental Radiography   2 3 0 3
This course provides a comprehensive view of the principles and procedures of radiology as they apply to dentistry. Topics include techniques in exposing, processing, and evaluating radiographs, as well as radiation safety, quality assurance, and legal issues. Upon completion, students should be able to demonstrate proficiency in the production of diagnostically acceptable radiographs using appropriate safety precautions.
Prerequisites: Enrollment in the Dental Hygiene program. Corequisites: None. (S)

DEN 120   Dental Hyg Preclinic Lec   2 0 0 2
This course introduces preoperative and clinical dental hygiene concepts. Emphasis is placed on the assessment phase of patient care as well as the theory of basic dental hygiene instrumentation. Upon completion, students should be able to collect and evaluate patient data at a basic level and demonstrate basic knowledge of dental hygiene instrumentation.
Prerequisites: Enrollment in the Dental Hygiene program. Corequisites: DEN 121. (F)

DEN 121   Dental Hygiene Precl Lab   0 6 0 2
This course provides the opportunity to perform clinical dental hygiene procedures discussed in DEN 120. Emphasis is placed on clinical skills in patient assessment and instrumentation techniques. Upon completion, students should be able to demonstrate the ability to perform specific preclinical procedures.
Prerequisites: Enrollment in the Dental Hygiene program.
Corequisites: DEN 120. (F)

DEN 123   Nutrition/Dental Health   2 0 0 2
This course introduces basic principles of nutrition with emphasis on nutritional requirements and their application to individual patient needs. Topics include the study of the food pyramid, nutrient functions, Recommended Daily Allowances, and related psychological principles. Upon completion, students should be able to recommend and counsel individuals on their food intake as related to their dental health.
Prerequisites: Enrollment in the Dental Hygiene program. Corequisites: None. (S)

DEN 124   Periodontology   2 0 0 2
This course provides an in-depth study of the periodontium, periodontal pathology, periodontal monitoring, and the principles of periodontal therapy. Topics include periodontal anatomy and a study of the etiology, classification, and treatment modalities of periodontal diseases. Upon completion, students should be able to describe, compare, and contrast techniques involved in periodontal/maintenance therapy, as well as patient care management.
Prerequisites: DEN 110. Corequisites: None. (SU)

DEN 130   Dental Hygiene Theory I   2 0 0 2
This course is a continuation of the didactic dental hygiene concepts necessary for providing an oral prophylaxis. Topics include deposits/removal, instrument sharpening, patient education, fluorides, planning for dental hygiene treatment, charting, and clinical records and procedures. Upon completion, students should be able to demonstrate knowledge needed to complete a thorough oral prophylaxis.
Prerequisites: DEN 120. Corequisites: DEN 131. (S)

DEN 131   Dental Hygiene Clinic I   0 0 9 3
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of the recall patients with gingivitis or light deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.
Prerequisites: DEN 121. Corequisites: DEN 130. (S)

DEN 140   Dental Hygiene Theory II   1 0 0 1
This course provides a continuation of the development, theory, and practice of patient care. Topics include modification of treatment for special needs patients, advanced radiographic interpretation, and ergonomics. Upon completion, students should be able to differentiate necessary treatment modifications, effective ergonomic principles, and radiographic abnormalities.
Prerequisites: DEN 130. Corequisites: DEN 141. (SU)

DEN 141   Dental Hygiene Clinic II   0 0 6 2
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with early periodontal disease and subgingival deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.
Prerequisites: DEN 131. Corequisites: DEN 140. (SU)

DEN 220   Dental Hygiene Theory III   2 0 0 2
This course provides a continuation in developing the theories and practices of patient care. Topics include periodontal debridement, pain control, subgingival irrigation, air polishing, and case presentations. Upon completion, students should be able to demonstrate knowledge of methods of treatment and management of periodontally compromised patients.
Prerequisites: DEN 140. Corequisites: DEN 221. (F)

DEN 221   Dental Hygiene Clinic III   0 0 12 4
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with moderate to advanced periodontal involvement and moderate deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.
Prerequisites: DEN 141. Corequisites: DEN 220. (F)

DEN 222   General & Oral Pathology   2 0 0 2
This course provides a general knowledge of oral pathological manifestations associated with selected systemic and oral diseases. Topics include developmental and degenerative diseases, selected microbial diseases, specific and nonspecific immune and inflammatory responses with emphasis on recognizing abnormalities. Upon completion, students should be able to differentiate between normal and abnormal tissues and refer unusual findings to the dentist for diagnosis.
Prerequisites: BIO 163 **or** BIO 168. Corequisites: None. (S)

DEN 223   Dental Pharmacology   2 0 0 2
This course provides basic drug terminology, general principles of drug actions, dosages, routes of administration, adverse reactions, and basic principles of anesthesiology. Emphasis is placed on knowledge of drugs in overall understanding of patient histories and health status. Upon completion, students should be able to recognize that each patient's general health or drug usage may require modification of the treatment procedures.
Prerequisites: Enrollment in the Dental Hygiene program.
Corequisites: BIO 163 **or** BIO 168. (F)

DEN 224   Materials and Procedures   1 3 0 2
This course introduces the physical properties of materials and related procedures used in dentistry. Topics include restorative and preventive materials, fabrication of casts and appliances, and chairside functions of the dental hygienist. Upon completion, students should be able to demonstrate proficiency in the laboratory and/or clinical application of routinely used dental materials and chairside functions.
Prerequisites: DEN 111. Corequisites: None. (S)

DEN 230   Dental Hygiene Theory IV   1 0 0 1
This course provides an opportunity to increase knowledge of the profession. Emphasis is placed on dental specialties and completion of a case presentation. Upon completion, students should be able to demonstrate knowledge of various disciplines of dentistry and principles of case presentations.
Prerequisites: DEN 220. Corequisites: DEN 231. (S)

DEN 231   Dental Hygiene Clinic IV   0 0 12 4
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on periodontal maintenance and on treating patients with moderate to advanced/refractory periodontal disease. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.
Prerequisites: DEN 221. Corequisites: DEN 230. (S)

DEN 232   Community Dental Health   2 0 3 3
This course provides a study of the principles and methods used in assessing, planning, implementing, and evaluating community dental health programs. Topics include epidemiology, research methodology, biostatistics, preventive dental care, dental health education, program planning, and financing and utilization of dental services. Upon completion, students should be able to assess, plan, implement, and evaluate a community dental health program.
Prerequisites: Enrollment in the Dental Hygiene program. Corequisites: None. (F)

DEN 233   Professional Development   2 0 0 2
This course includes professional development, ethics, and jurisprudence with applications to practice management. Topics include conflict management, state laws, résumés, interviews, and legal liabilities as health care professionals. Upon completion, students should be able to demonstrate the ability to practice dental hygiene within established ethical standards and state laws.
Prerequisites: Enrollment in the Dental Hygiene program. Corequisites: None. (S)

DRAFTING

DFT 111   Technical Drafting I   1 3 0 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.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: DFT 111A. (S)

DFT 111A   Technical Drafting I Lab   0 3 0 1
This course provides a laboratory setting to enhance basic drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 111. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 111.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: DFT 111. (S)

DFT 117   Technical Drafting   1 2 0 2
This course introduces basic drafting practices for non-drafting majors. Emphasis is placed on instrument use and care, shape and size description, sketching, and pictorials. Upon completion, students should be able to produce drawings of assigned parts.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (F)

DFT 151   CAD I   2 3 0 3
This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: None. (F,S)

DFT 152   CAD II   2 3 0 3
This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: None. (F)

DFT 170 Engineering Graphics (Coll/Tran)   2 2 0 3
This course introduces basic engineering graphics skills and applications. Topics include sketching, selection and use of current methods and tools, and the use of engineering graphics applications. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (S)

DRAMA/THEATRE

DRA 111   Theatre Appreciation (Coll/Tran)   3 0 0 3
This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists.
Prerequisites: None. Corequisites: None. (F,S,SU)

DRA 112   Literature of the Theatre (Coll/Tran)   3 0 0 3
This course provides a survey of dramatic works from the classical Greek through the present. Emphasis is placed on the language of drama, critical theory, and background as well as on play reading and analysis. Upon completion, students should be able to articulate, orally and in writing, their appreciation and understanding of dramatic works.
Prerequisites: None. Corequisites: None. (On demand)

DRA 115   Theatre Criticism (Coll/Tran)   3 0 0 3
This course is designed to develop a critical appreciation of the theatre from the viewpoint of the audience/consumer. Emphasis is placed on viewing, discussing, and evaluating selected theatre performance, either live or on film/video. Upon completion, students should be able to express their critical judgments both orally and in writing.
Prerequisites: DRA 111. Corequisites: None. (On demand)

DRA 120   Voice for Performance (Coll/Tran)   3 0 0 3
This course provides guided practice in the proper production of speech for the theatre. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective theatrical speech.
Prerequisites: None Corequisites: None. (F)

DRA 122 Oral Interpretation (Coll/Tran) **3 0 0 3**
This course introduces the dramatistic study of literature through performance. Emphasis is placed on analysis and performance of poetry, drama, and prose fiction. Upon completion, students should be able to embody and discuss critically the speakers inherent in literature.
Prerequisites: None. Corequisites: None. (On demand)

DRA 124 Readers Theatre (Coll/Tran) **3 0 0 3**
This course provides a theoretical and applied introduction to the medium of readers theatre. Emphasis is placed on the group performance considerations posed by various genres of literature. Upon completion, students should be able to adapt and present a literary script following the conventions of readers theatre.
Prerequisites: None. Corequisites: None. (On demand)

DRA 126 Storytelling (Coll/Tran) **3 0 0 3**
This course introduces the art of storytelling and the oral traditions of folk literature. Topics include the history of storytelling, its value and purpose, techniques of the storyteller, and methods of collecting verbal art. Upon completion, students should be able to present and discuss critically stories from the world's repertory of traditional lore.
Prerequisites: None. Corequisites: None. (On demand)

DRA 128 Children's Theatre (Coll/Tran) **3 0 0 3**
This course introduces the philosophy and practice involved in producing plays for young audiences. Topics include the selection of age-appropriate scripts and the special demands placed on directors, actors, designers, and educators in meeting the needs of young audiences. Upon completion, students should be able to present and critically discuss productions for children.
Prerequisites: None. Corequisites: None. (On demand)

DRA 130 Acting I (Coll/Tran) **0 6 0 3**
This course provides an applied study of the actor's craft. Topics include role analysis, training the voice, and body concentration, discipline, and self-evaluation. Upon completion, students should be able to explore their creativity in an acting ensemble.
Prerequisites: None. Corequisites: None. (F)

DRA 131 Acting II (Coll/Tran) **0 6 0 3**
This course provides additional hands-on practice in the actor's craft. Emphasis is placed on further analysis, characterization, growth, and training for acting competence. Upon completion, students should be able to explore their creativity in an acting ensemble.
Prerequisites: DRA 130. Corequisites: None. (S)

DRA 132 Stage Movement (Coll/Tran) **2 2 0 3**
This course provides an applied study of selected principles of stage movement for actors. Topics include improvisation, mime, stage combat, clowning, choreography, and masks. Upon completion, students should be able to focus properly on stage, to create characters, and to improvise scenes, perform mimes, fight, clown, juggle, and waltz.
Prerequisites: None. Corequisites: DRA 111. (On demand)

DRA 135 Acting for the Camera I (Coll/Tran) **1 4 0 3**
This course provides an applied study of the camera actor's craft. Topics include commercial, dramatic, and print performance styles. Upon completion, students should be able to explore their creativity in on-camera performance.
Prerequisites: None. Corequisites: None. (On demand)

DRA 136 Acting for the Camera II (Coll/Tran) **1 4 0 3**
This course provides additional hands-on study of the camera actor's craft. Emphasis is placed on more advanced camera acting theories, auditioning techniques, daytime drama, feature film, and print advertisement performance styles. Upon completion, students should be able to explore their creativity in on-camera performance.
Prerequisites: DRA 135. Corequisites: None. (On demand)

DRA 140 Stagecraft I (Coll/Tran) **0 6 0 3**
This course introduces the theory and basic construction of stage scenery and properties. Topics include stage carpentry, scene painting, stage electrics, properties, and backstage organization. Upon completion, students should be able to pursue vocational and avocational roles in technical theatre.
Prerequisites: None. Corequisites: None. (F)

DRA 141 Stagecraft II (Coll/Tran) **0 6 0 3**
This course provides additional hands-on practice in the elements of stagecraft. Emphasis is placed on the design and implementation of the arts and crafts of technical theatre. Upon completion, students should be able to pursue vocational or avocational roles in technical theatre.
Prerequisites: DRA 140. Corequisites: None. (On demand)

DRA 142 Costuming (Coll/Tran) **2 2 0 3**
This course covers the techniques of costume construction and crafts processes. Emphasis is placed on learning costuming techniques, using equipment and materials, and finishing production-appropriate costumes. Upon completion, students should be able to demonstrate an understanding of pattern drafting, construction techniques, and costume fitting procedures.
Prerequisites: None. Corequisites: None. (On demand)

DRA 145 Stage Make-up (Coll/Tran) **1 2 0 2**
This course covers the research, design, selection of materials, and application of stage make-up, prosthetics, wigs, and hairpieces. Emphasis is placed on the development of techniques, style, and presentation of the finished make-up. Upon completion, students should be able to create and apply make-up, prosthetics, and hairpieces.
Prerequisites: None. Corequisites: None. (S)

DRA 150 Stage Management (Coll/Tran) **3 0 0 3**
This course covers the skills necessary for a stage manager of school or professional productions. Emphasis is placed on scheduling, rehearsal documentation and management, personnel, paperwork, and organization. Upon completion, students should be able to effectively stage-manage entertainment productions.
Prerequisites: DRA 140. Corequisites: None. (On demand)

DRA 170 Play Production I (Coll/Tran) **0 9 0 3**
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.
Prerequisites: None. Corequisites: None. (F,S)

DRA 171 Play Production II (Coll/Tran) **0 9 0 3**
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.
Prerequisites: DRA 170. Corequisites: None. (F,S)

DRA 211 Theatre History I (Coll/Tran) **3 0 0 3**
This course covers the development of theatre from its origin to the closing of the British theatre in 1642. Topics include the history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles and types of world drama.
Prerequisites: None. Corequisites: None. (F)

DRA 212 Theatre History II (Coll/Tran) **3 0 0 3**
This course covers the development of theatre from 1660 through the diverse influences which shaped the theatre of the twentieth century. Topics include the history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles and types of world drama.
Prerequisites: None. Corequisites: None. (S)

DRA 240 Lighting for the Theatre (Coll/Tran) **2 2 0 3**
This course is an applied study of theatre lighting and is designed to train theatre technicians. Emphasis is placed on lighting technology including the mechanics of lighting and light control equipment by practical work with lighting equipment. Upon completion, students should be able to demonstrate competence with lighting equipment.
Prerequisites: None. Corequisites: None. (On demand)

DRA 260 Directing (Coll/Tran) **0 6 0 3**
This course provides an analysis and application of the techniques of theatrical directing. Topics include script selection, analysis, casting, rehearsal planning, blocking, stage business, tempo, and technical considerations. Upon completion, students should be able to plan, execute, and critically discuss a student-directed production.
Prerequisites: DRA 130. Corequisites: DRA 140. (F)

DRA 270 Play Production III (Coll/Tran) **0 9 0 3**
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.
Prerequisites: DRA 171. Corequisites: None. (F,S)

DRA 271 Play Production IV (Coll/Tran) **0 9 0 3**
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.
Prerequisites: DRA 270. Corequisites: None. (F,S)

ECONOMICS

ECO 251 Prin of Microeconomics (Coll/Tran) **3 0 0 3**
This course introduces economic analysis of individual, business, and industry in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives.
Prerequisites: None. Corequisites: None. (F)

ECO 252 Prin of Macroeconomics (Coll/Tran) **3 0 0 3**
This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals.
Prerequisites: None. Corequisites: None. (On demand)

ELECTRONEURODIAGNOSTIC TECHNOLOGY

EDT 110 Neuroscience/Pathol Cond **4 0 0 4**
This course covers the anatomy and physiology of the nervous system as well as those disease processes which affect nervous system components. Topics include anatomy, physiology, and pathology of the neuron, brain, spinal cord, peripheral nerves, and the special senses. Upon completion, students should be able to understand the structure and function of the nervous system and how this structure/function is affected by specific diseases.
Prerequisites: None. Corequisites: None. (F)

EDT 111 Laboratory Management **1 0 0 1**
This course provides the skills and knowledge necessary to effectively manage and/or function as a team player in an electroneurodiagnostics department. Topics include the role of an effective manager, the role of a team player, techniques for scheduling, record keeping/storage, and creation/implementation of department policies. Upon completion, students should be able to understand those skills necessary to manage an electroneurodiagnostics department, both independently and as a team worker.
Prerequisites: None. Corequisites: None. (F)

EDT 111A EDT Laboratory Basics **0 2 0 1**
This course is designed to be offered as a supplemental lab for the EDT 111 course. Emphasis is placed on interview skills, system of electrode placement, and the role of effective communication in the EDT department. Upon completion, students should be able to demonstrate basic competencies in preparation for performing electroneurodiagnostic testing.
Prerequisites: None. Corequisites: EDT 111. (F)

EDT 112 Instrument/Record Methods **3 0 0 3**
This course covers theories of electrode placement, various instrumentation components used in neurological testing, and optimal recording techniques based on patient status. Topics include the International 10-20 System of electrode placement, electrode types/applications, electronics applicable to neurological testing, instrument controls, montages, and polarity/localization. Upon completion, students should be able to understand the theories underlying optimal utilization of electrodes and instrumentation for neurological testing.
Prerequisites: None. Corequisites: None. (S)

EDT 113 Clinical Correlates **2 0 0 2**
This course covers normal and abnormal neurological test findings associated with the anatomy/physiology/pathology covered in EDT 100. Topics include normal and abnormal neurological test results, artifacts, and activation procedures utilizing teaching records from affiliated laboratories. Upon completion, students should be able to identify patterns and artifacts on neurological tests in order that optimal recording strategies may be utilized.
Prerequisites: None. Corequisites: None. (S)

EDT 114 Special Procedures **3 0 0 3**
This course provides a basic understanding of special testing procedures used in neurological diagnosis. Topics include foundations of evoked potentials, nerve conduction studies, operating room monitoring, ambulatory EEGs, long-term video monitoring, polysomnography, and various radiological procedures. Upon completion, students should be able to demonstrate an understanding of the principles of various special procedures used in neurological diagnosis.
Prerequisites: EDT 112. Corequisites: None. (F)

EDT 115 EDT Laboratory Practice **0 6 0 2**
This course provides a practical application of theories covered in previous EDT courses. Emphasis is placed on practical skill development in neurological testing, appropriate patient rapport, infection control, and electrical safety guidelines, using mock situations. Upon completion, students should be able to conduct optimal neurological testing in mock situations.
Prerequisites: None. Corequisites: None. (S)

EDT 116 EDT Clinical Experience **0 0 36 12**
This course provides clinical experience in a hospital neurology department under the supervision of a qualified technologist. Emphasis is placed on qualified interaction between patients/families and hospital personnel and optimal skill level development in neurological testing. Upon completion, students should be able to conduct themselves professionally in a hospital setting and conduct optimal neurological studies as ordered by physicians.
Prerequisites: None. Corequisites: None. (S)

EDT 118 EDT Laboratory Practice II **0 9 0 3**
This course is a continuation of EDT 115. Emphasis is placed on practical skills developed in neurological testing, to include the basic EEG along with special testing procedures. Upon completion, students should be able to conduct neurological testing in mock situations.
Prerequisites: EDT 115. Corequisites: EDT 114. (F)

EDUCATION

EDU 216 Foundations of Education (Coll/Tran) **4 0 0 4**
This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational, structural, legal, and financial issues, and experiences 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.
Prerequisites: ENG 090, RED 090 **or** ENG 095. Corequisites: None. (On demand)

EDU 119 Intro to Early Child Educ **4 0 0 4**
This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for children. Topics include historical foundations, program types, career options, professionalism, and creating inclusive environments and curriculum that are responsive to the needs of children and families.
Upon completion, students should be able design career plans and develop appropriate schedules, environments and activity plans appropriate for all children.
Prerequisites: None. Corequisites: None. (F,S)

EDU 131   Child, Family, & Commun   3 0 0 3
This course covers the development of partnerships between families, inclusive programs for children/schools that serve young children with and without disabilities, and the community. Emphasis is placed on requisite skills and benefits for successfully establishing, supporting, and maintaining respectful collaborative relationships between today's diverse families, centers/schools, and community resources. Upon completion, students should be able to describe appropriate relationships with parents/caretakers, center/school colleagues, and community agencies that enhance the educational experiences/well-being of all children.
Prerequisites: ENG 080, RED 080 **or** appropriate placement test score.
Corequisites: None. (F)

EDU 144   Child Development I (Coll/Tran)   **3 0 0 3**
This course covers the theories of child development, developmental sequences, and factors that influence children's development, from conception through pre-school for all children. Emphasis is placed on sequences in physical/motor, social, emotional, cognitive, and language development and the multiple influences on development and learning of the whole child. Upon completion, students should be able to identify typical and atypical developmental characteristics, plan experiences to enhance development, and describe appropriate interaction techniques and environments.
Prerequisites: ENG 080, RED 080 **or** appropriate placement test score.
Corequisites: None. (F)

EDU 145   Child Development II (Coll/Tran)   **3 0 0 3**
This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.
Prerequisites: ENG 080, RED 080 **or** appropriate placement test score.
Corequisites: None. (S)

EDU 146   Child Guidance (Coll/Tran)   **3 0 0 3**
This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observation skills, cultural influences, underlying causes of behavior, appropriate expectations, development of self control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors.
Prerequisites: ENG 080, RED 080 **or** appropriate placement test score.
Corequisites: None. (S)

EDU 151   Creative Activities   3 0 0 3
This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement, and dramatics for all children. Upon completion, students should be able to create, manage, adapt implement and evaluate developmentally supportive learning materials, experiences and environments.
Prerequisites: ENG 080, RED 080. Corequisites: None. (F)

EDU 153   Health, Safety, & Nutrit   3 0 0 3
This course covers promoting and maintaining the health and well-being of all children. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, recognition and reporting of abuse and neglect and state regulations. Upon completion, students should be able to demonstrate knowledge of health, safety, and nutritional needs, safe learning environments, and adhere to state regulations.
Prerequisites: ENG 080, RED 080. Corequisites: None. (S, SU)

EDU 216   Foundations of Education (Coll/Tran)   **4 0 0 4**
This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational, structural, legal, and financial issues, and experiences 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.
Prerequisites: ENG 090, RED 090 or ENG 095. Corequisites: None. (On Demand)

EDU 221   Children with Exceptional (Coll/Tran)   **3 0 0 3**
This course introduces children with exceptionalities, their families, support services, inclusive/diverse settings, and educational/family plans based on the foundations of child development. Emphasis is placed on the characteristics of exceptionalities, observation and assessment of children, strategies for adapting the learning environment, and identification of community resources. Upon completion, students should be able to recognize diverse abilities, describe the referral process, and depict collaboration with families/professionals to plan/implement, and promote best practice.
Prerequisites: ENG 090, RED 090, EDU 144 **and** EDU 145 **or** PSY 244 **and** PSY 245. Corequisites: None. (F)

EDU 234   Infants, Toddlers, & Twos   3 0 0 3
This course covers the unique needs and rapid changes that occur in the first three years of life and the inter-related factors that influence development. Emphasis is placed on recognizing and supporting developmental milestones through purposeful strategies, responsive care routines and identifying elements of quality, inclusive early care and education. Upon completion, students should be able to demonstrate respectful relationships that provide a foundation for healthy infant/toddler/twos development, plan/select activities/materials, and partner with diverse families.
Prerequisites: ENG 090, EDU 119, RED 090. Corequisites: None. (S)

EDU 235   School-Age Dev & Program   3 0 0 3
This course includes developmentally appropriate practices in group settings for school-age children. Emphasis is placed on principles of development, environmental planning, and positive guidance techniques. Upon completion, students should be able to discuss developmental principles for all children ages five to twelve and plan and implement developmentally-appropriate activities.
Prerequisites: ENG 090, RED 090. Corequisites: None. (On demand)

EDU 251   Exploration Activities   3 0 0 3
This course covers discovery experiences in science, math, and social studies. Emphasis is placed on developing concepts for each area and encouraging young children to explore, discover, and construct concepts. Upon completion, students should be able to discuss the discovery approach to teaching, explain major concepts in each area, and plan appropriate experiences for children.
Prerequisites: ENG 090, RED 090 **or** appropriate placement test score.
Corequisites: None. (S)

EDU 259   Curriculum Planning   3 0 0 3
This course is designed to focus on curriculum planning for three to five year olds. Topics include philosophy, curriculum models, indoor and outdoor environments, scheduling, authentic assessment, and planning developmentally appropriate experiences. Upon completion, students should be able to evaluate children's development, critique curriculum, plan for individual and group needs, and assess and create quality environments.
Prerequisites: ENG 090, EDU 119; RED 090 **or** appropriate placement test score. Corequisites: None. (F)

EDU 261   Early Childhood Admin I   3 0 0 3
This course introduces principles of basic programming and staffing, budgeting/financial management and marketing, and rules and regulations of diverse early childhood programs. Topics include program structure and philosophy, standards of NC child care programs, finance, funding resources, and staff and organizational management. Upon completion, students should be able to develop components of program/personnel handbooks, a program budget, and demonstrate knowledge of fundamental marketing strategies and NC standards.
Prerequisites: ENG 090, RED 090. Corequisites: EDU 119. (F)

EDU 262   Early Childhood Admin II   3 0 0 3
This course focuses on advocacy/leadership, public relations/community outreach and program quality/evaluation for diverse early childhood programs. Topics include program evaluation/accreditation, involvement in early childhood professional organizations, leadership/mentoring, family, volunteer and community involvement and early childhood advocacy. Upon completion, students should be able to define and evaluate all components of early childhood programs, develop strategies for advocacy and integrate community into programs.
Prerequisites: ENG 090, RED 090, EDU 261. Corequisites: EDU 119. (S)

EDU 271   Educational Technology   2 2 0 3
This course introduces the use of technology to enhance teaching and learning in all educational settings. Topics include technology concepts, instructional strategies, materials and adaptive technology for children with exceptionalities, facilitation of assessment/evaluation, and ethical issues surrounding the use of technology. Upon completion, students should be able to apply technology enhanced instructional strategies, use a variety of technology resources and demonstrate appropriate technology skills in educational environments.
Prerequisites: ENG 090, CTS 080, RED 090 **or** appropriate placement test score. Corequisites: None. (F)

EDU 275   Effective Teach Train   2 0 0 2
This course provides specialized training using an experienced-based approach to learning. Topics include instructional preparation and presentation, student interaction, time management, learning expectations, evaluation, and curriculum principles and planning. Upon completion, students should be able to prepare and present a six-step lesson plan and demonstrate ways to improve students' time-on-task.
Prerequisites: ENG 090, RED 090. Corequisites: None. (On demand)

EDU 280   Language & Literacy Exp   3 0 0 3
This course explores the continuum of children's communication development, including verbal and written language acquisition and other forms of communication. Topics include selection of literature and other media, the integration of literacy concepts throughout the classroom environment, inclusive practices and appropriate assessments. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate literacy experiences.
Prerequisites: ENG 090, RED 090 **or** appropriate placement test score. Corequisites: None.(S)

EDU 284   Early Child Capstone Prac   1 9 0 4
This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and on-site faculty visits.
Prerequisites: ENG 090, RED 090, EDU 119, EDU 144, EDU 145, EDU 146, EDU 151. Corequisites: None (F, S)

ENGINEERING

EGR 110   Intro to Engineering Tech   1 2 0 2
This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: ELC 138. (F)

EGR 150   Intro to Engineering   1 2 0 2
This course is an overview of the engineering profession. Topics include goal setting and career assessment, ethics, public safety, the engineering method and design process, written and oral communication, interpersonal skills and team building, and computer applications. Upon completion, students should be able to understand the engineering process, the engineering profession, and utilize college resources to meet their educational goals.
Prerequisites: None. Corequisites: None. (On d emand)

EGR 210   Intro to Elec/Com Eng Lab (Coll/Tran)   **1 3 0 2**
This course provides an overview of electrical and computer engineering, through a lecture and laboratory setting. Topics include fundamental concepts, electronic circuits, digital circuits, communication systems, and signal processing. Upon completion, students should be able to discuss the wide range of fields available to the electrical or computer engineer.
Prerequisites: MAT 271, PHY 251. Corequisites: None. (On demand)

EGR 220   Engineering Statics (Coll/Tran)   **3 0 0 3**
This course introduces the concepts of engineering based on forces in equilibrium. Topics include concentrated forces, distributed forces, forces due to friction, and inertia as they apply to machines, structures, and systems. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium.
Prerequisites: PHY 251. Corequisites: MAT 272. (On demand)

ELECTRICITY

ELC 111   Intro to Electricity   2 2 0 3
This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronics majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.
Prerequisites: None. Corequisites:None.

ELC 112   DC/AC Electricity   3 6 0 5
This course introduces the fundamental concepts of and computations related to DC/AC electricity. Emphasis is placed on DC/AC circuits, components, operation of test equipment; and other related topics. Upon completion, students should be able to construct, verify, troubleshoot, and repair DC/AC circuits.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: DMA 010, DMA 020, DMA 030 **or** appropriate placement test score. (F, S)

ELC 113   Basic Wiring I   2 6 0 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.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (F)

ELC 115   Industrial Wiring   2 6 0 4
This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment.
Prerequisites: ELC 113; RED 080 **or** appropriate placement test score. Corequisites: None. (S)

ELC 117   Motors and Controls   2 6 0 4
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.
Prerequisites: ELC112; ELC 132 **or** BPR 111; RED 080 **or** appropriate placement test score. Corequisites: None. (F,S)

ELC 118   National Electrical Code   1 2 0 2
This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (F)

ELC 119   NEC Calculations   1 2 0 2
This course covers branch circuit, feeder, and service calculations. Emphasis is placed on sections of the National Electrical Code related to calculations. Upon completion, students should be able to use appropriate code sections to size wire, conduit, and overcurrent devices for branch circuits, feeders, and service.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: ELC 118. (F, S)

ELC 128   Intro to PLC   2 3 0 3
This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to install PLCs and create simple programs.
Prerequisites: RED 080, CTS 080 **or** appropriate placement test score. Corequisites: ELC 117. (S)

ELC 135 Electrical Machines I 2 2 0 3
This course covers magnetic circuits, transformers, DC/AC machines, and the three-phase circuit fundamentals including power factor. Topics include magnetic terms and calculations, transformer calculations based on primary or secondary equivalent circuits, and regulation and efficiency calculations. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC machine circuits.
Prerequisites: ELC 139; RED 080 **or** appropriate placement test score. Corequisites: None. (On demand)

ELC 136 Electrical Machines II 3 3 0 4
This course covers DC/AC machine fundamentals including applications and control. Topics include control devices and induction single and polyphase AC motors, DC motors, stepper, and special purpose motors. Upon completion, students should be able to perform regulation and efficiency calculations and apply motor theory to practical control applications.
Prerequisites: ELC 135; RED 080 **or** appropriate placement test score. Corequisites: None. (On demand)

ELC 138 DC Circuit Analysis 3 3 0 4
This course introduces DC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, and analyze DC circuits; and properly use test equipment.
Prerequisites: RED 090 **or** appropriate placement test score. Corequisites: EGR 110, MAT 121. (F)

ELC 139 AC Circuit Analysis 3 3 0 4
This course introduces AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include AC voltages, circuit analysis laws and theorems, reactive components and circuits, transformers, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret AC circuit schematics; analyze and troubleshoot AC circuits; and properly use test equipment.
Prerequisites: ELC 138. Corequisites: MAT 122. (S)

ELC 229 Applications Project 1 3 0 2
This course provides an individual and/or integrated team approach to a practical project as approved by the instructor. Topics include project selection and planning, implementation and testing, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented project.
Prerequisites: ELN 132, ELN 133. Corequisites: None. (S)

ELECTRONICS

ELN 131 Semiconductor Applications 3 3 0 4
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot discrete component circuits using appropriate techniques and test equipment.
Prerequisites: ELC 138. Corequisites: None (F, S)

ELN 132 Linear IC Applications 3 3 0 4
This course introduces the characteristics and applications of linear integrated circuits. Topics include op-amp circuits, waveform generators, active filters, IC voltage regulators, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot linear integrated circuits using appropriate techniques and test equipment.
Prerequisites: ELN 131. Corequisites: None. (F, S)

ELN 133 Digital Electronics 3 3 0 4
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, A/D, D/A converters, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.
Prerequisites: ELN 131. Corequisites: None. (F, S)

ELN 229 Industrial Electronics 3 3 0 4
This course covers semiconductor devices used in industrial applications. Topics include the basic theory, application, and operating characteristics of semiconductor devices. Upon completion, students should be able to install and/or troubleshoot these devices for proper operation in an industrial electronic circuit.
Prerequisites: ELC 112. Corequisites: None. (F, S)

ELN 231 Industrial Controls 2 3 0 3
This course introduces the fundamental concepts of control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret schematics and demonstrate an understanding of electromechanical and electronic control of rotating machinery.
Prerequisites: ELN 131. Corequisites: None. (On demand)

ELN 233 Microprocessor Systems 3 3 0 4
This course covers the application and design of microprocessor control systems. Topics include control and interfacing of systems using AD/DA, serial/parallel I/O, communication protocols, and other related applications. Upon completion, students should be able to design, construct, program, verify, analyze, and troubleshoot fundamental microprocessor interface and control circuits using related equipment.
Prerequisites: ELN 133, CSC 134. Corequisites: None. (S)

ELN 234 Communication Systems 3 3 0 4
This course introduces the fundamentals of electronic communication systems. Topics include the frequency spectrum, electrical noise, modulation techniques, characteristics of transmitters and receivers, and digital communications. Upon completion, students should be able to interpret analog and digital communication circuit diagrams, analyze transmitter and receiver circuits, and use appropriate communication test equipment.
Prerequisites: ELN 132. Corequisites: None. (S)

ELN 235 Data Communication Sys 3 3 0 4
This course covers data communication systems and the transmission of digital information from source to destination. Topics include data transmission systems, interfaces and modems, protocols, networks, and other related topics. Upon completion, students should be able to demonstrate knowledge of the concepts associated with data communication systems.
Prerequisites: ELN 133. Corequisites: None. (On demand)

ELN 260 Prog Logic Controllers 3 3 0 4
This course provides a detailed study of PLC applications, with a focus on design of industrial controls using the PLC. Topics include PLC components, memory organization, math instructions, documentation, input/output devices, and applying PLCs in industrial control systems. Upon completion, students should be able to select and program a PLC system to perform a wide variety of industrial control functions.
Prerequisites: ELN 131. Corequisites: None. (On demand)

EMERGENCY MEDICAL SCIENCE

EMS 110 EMT-Basic 5 6 0 7
This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT-Basic certification.
Prerequisites: Enrollment in EMS program. Corequisites: BIO 169. (F)

EMS 120 Intermediate Interventions 2 3 0 3
This course is designed to provide the necessary information for interventions appropriate to the EMT-Intermediate and is required for intermediate certification. Topics include automated external defibrillation, basic cardiac electrophysiology, intravenous therapy, venipuncture, acid-base balance, and fluids and electrolytes. Upon completion, students should be able to properly establish an IV line, obtain venous blood, and correctly interpret arterial blood gases.
Prerequisites: BIO 169, EMS 110. Corequisites: EMS 121, EMS 130, EMS 131. (S)

EMS 121   EMS Clinical Practicum I   0 0 6 2
This course is the initial hospital and field internship, and is required for intermediate and paramedic certification. Emphasis is placed on intermediate-level care. Upon completion, students should be able to demonstrate competence with intermediate level skills.
Prerequisites: EMS 110. Corequisites: EMS 120, EMS 130, EMS 131. (S)

EMS 130   Pharmacology I for EMS   1 3 0 2
This course introduces the fundamental principles of pharmacology and medication administration and is required for intermediate and paramedic certification. Topics include terminology, pharmacokinetics, pharmacodynamics, weights, measures, drug calculations, legislation, and administration routes. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology.
Prerequisites: EMS 110; DMA 010, DMA 020, DMA 030, DMA 040 **or** appropriate placement test score. Corequisites: EMS 120, EMS 131, EMS 121. (S)

EMS 131   Adv Airway Management   1 2 0 2
This course is designed to provide advanced airway management techniques and is required for intermediate and paramedic certification. Topics include respiratory anatomy and physiology, airway, ventilation, adjuncts, surgical intervention, and rapid sequence intubation. Upon completion, students should be able to properly utilize all airway adjuncts and pharmacology associated with airway control and maintenance.
Prerequisites: EMS 110. Corequisites: EMS 120, EMS 130, EMS 121. (S)

EMS 140   Rescue Scene Management   1 3 0 2
This course introduces rescue scene management and is required for paramedic certification. Topics include response to hazardous material conditions, medical incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment. Students are expected to participate in hands-on training and simulated incidents.
Prerequisites: Enrollment in EMS program. Corequisites: None. (F)

EMS 150   Emerg Vehicles & EMS Comm   1 3 0 2
This course examines the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment and is required for paramedic certification. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs. Actual driving experience utilizing evasive driving maneuvers will be provided based on the availability of a vehicle.
Prerequisites: Enrollment in EMS program. Corequisites: None. (F)

EMS 210   Adv Patient Assessment   1 3 0 2
This course covers advanced patient assessment techniques and is required for paramedic certification. Topics include initial assessment, medical-trauma history, field impression, complete physical exam process, on-going assessment, and documentation skills. Upon completion, students should be able to utilize basic communication skills and record and report collected patient data.
Prerequisites: EMS 120, EMS 130, EMS 131, EMS 121.
Corequisites: None. (SU)

EMS 220   Cardiology   2 6 0 4
This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, rhythm interpretation, cardiac pharmacology, and patient treatment. Upon completion, students should be able to certify at the Advanced Cardiac Life Support Provider level utilizing American Heart Association guidelines.
Prerequisites: EMS 120, EMS 130, EMS 131. Corequisites: EMS 231. (F)

EMS 221   EMS Clinical Practicum II   0 0 9 3
This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. This course will be completed under the supervision of an assigned preceptor.
Prerequisites: EMS 121. Corequisites: EMS 250. (SU)

EMS 231   EMS Clinical Pract III   0 0 9 3
This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. This course will be completed under the supervision of an assigned preceptor.
Prerequisites: EMS 221. Corequisites: EMS 220, EMS 270. (F)

EMS 235   EMS Management   2 0 0 2
This course stresses the principles of managing a modern emergency medical service system. Topics include structure and function of municipal governments, EMS grantsmanship, finance, regulatory agencies, system management, legal issues, and other topics relevant to the EMS manager. Upon completion, students should be able to understand the principles of managing emergency medical service delivery systems.
Prerequisites: Enrollment in EMS program. Corequisites: None. (S)

EMS 240   Special Needs Patients   1 2 0 2
This course includes concepts of crisis intervention and techniques of dealing with special needs patients and is required for paramedic certification. Topics include behavioral emergencies, abuse, assault, challenged patients, personal well-being, home care, and psychotherapeutic pharmacology. Upon completion, students should be able to recognize and manage frequently encountered special needs patients.
Prerequisites: EMS 120, EMS 121 **or** EMS130, EMS 131.
Corequisites: None. (S)

EMS 241   EMS Clinical Practicum IV   0 0 9 3
This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic. This course will be completed under the supervision of an assigned preceptor.
Prerequisites: EMS 231. Corequisites: EMS 285. (S)

EMS 250   Advanced Medical Emergencies   2 3 0 3
This course provides an in-depth study of medical conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include pulmonology, neurology, endocrinology, anaphylaxis, gastroenterology, toxicology, and environmental emergencies integrating case presentation and emphasizing pharmacotherapeutics. Upon completion, students should be able to recognize and manage frequently encountered medical conditions based upon initial patient impression.
Prerequisites: BIO 169, EMS 120, EMS 130, EMS 131, EMS 121.
Corequisites: EMS 221. (SU)

EMS 260   Advanced Trauma Emergencies   1 3 0 2
This course provides in-depth study of trauma including pharmacological interventions for conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include hemorrhage control, shock, burns, and trauma to head, spine, soft tissue, thoracic, abdominal, and musculoskeletal areas with case presentations utilized for special problem situations. Upon completion, students should be able to recognize and manage trauma situations based upon patient impressions and should meet requirements of BTLS or PHTLS courses.
Prerequisites: EMS 120, EMS 130, EMS 131, EMS 121.
Corequisites: EMS 250 and EMS 221. (SU)

EMS 270   Life Span Emergencies   2 2 0 3
This course, required for paramedic certification, covers medical/ethical/legal issues and the spectrum of age-specific emergencies from conception through death. Topics include gynecological, obstetrical, neonatal, pediatric, and geriatric emergencies and pharmacological therapeutics. Upon completion, students should be able to recognize and treat age-specific emergencies and certify at the Pediatric Advanced Life Support Provider level.
Prerequisites: EMS 120, EMS 130, EMS 131. Corequisites: EMS 231. (F)

EMS 285   EMS Capstone   1 3 0 2
This course provides an opportunity to demonstrate problem-solving skills as a team leader in simulated patient scenarios and is required for paramedic certification. Emphasis is placed on critical thinking, integration of didactic and psychomotor skills, and effective performance in simulated emergency situations. Upon completion, students should be able to recognize and appropriately respond to a variety of EMS-related events. Students will be challenged to perform under adverse conditions which may include but are not limited to inclement weather, faulty equipment, noncooperative patients and insufficient help.
Prerequisites: EMS 220, EMS 250, EMS 260, EMS 231, EMS 270.
Corequisites: EMS 241. (S)

ENGLISH

ENG 070   Basic Language Skills   2 2 0 3
This course introduces the fundamentals of standard written English. Emphasis is placed on effective word choice, recognition of sentences and sentence parts, and basic usage. Upon completion, students should be able to generate sentences that clearly express ideas. This course does not satisfy the developmental reading and writing prerequisite for ENG 111 or ENG 111A.
Prerequisites: None. Corequisites: None. (F,S)

ENG 080   Writing Foundations   3 2 0 4
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.
Prerequisites: ENG 070 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

ENG 090   Composition Strategies   3 0 0 3
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.
Prerequisites: ENG 080 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

ENG 090A   Comp Strategies Lab   0 2 0 1
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.
Prerequisites: ENG 080 **or** appropriate placement test score.
Corequisites: ENG 090. (F,S,SU)

ENG 102   Applied Communications II   3 0 0 3
This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: None. (F,S)

ENG 111   Expository Writing (Coll/Tran)   **3 0 0 3**
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.
Prerequisites: ENG 090, RED 090; **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

ENG 112   Argument-Based Research (Coll/Tran) **3 0 0 3**
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.
Prerequisites: ENG 111 must pass with a grade of "C" or higher.
Corequisites: None. (F,S)

ENG 113   Literature-Based Research (Coll/Tran) **3 0 0 3**
This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works.
Prerequisites: ENG 111 must pass with a grade of "C" or higher.
Corequisites: None. (F,S,SU)

ENG 114   Prof Research & Reporting (Coll/Tran) **3 0 0 3**
This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations.
Prerequisites: ENG 111 must pass with a grade of "C" or higher.
Corequisites: None. (F,S,SU)

ENG 125   Creative Writing I (Coll/Tran)   **3 0 0 3**
This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing, fiction, poetry, and sketches. Upon completion, students should be able to craft and critique their own writing and critique the writing of others.
Prerequisites: ENG 111 must pass with a grade of "C" or higher.
Corequisites: ENG 112 **or** ENG 113 **or** ENG 114. (S)

ENG 126   Creative Writing II (Coll/Tran)   **3 0 0 3**
This course is designed as a workshop approach for advancing imaginative and literary skills. Emphasis is placed on the discussion of style, techniques, and challenges for first publications. Upon completion, students should be able to submit a piece of their writing for publication.
Prerequisites: ENG 125 must pass with a grade of "C" or higher.
Corequisites: None.

ENG 231   American Literature I (Coll/Tran)   **3 0 0 3**
This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher). Corequisites: None. (F,SU)

ENG 232   American Literature II (Coll/Tran)   **3 0 0 3**
This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher). Corequisites: None. (S,SU)

ENG 235   Survey of Film as Lit   3 0 0 3
This course provides a study of the medium of film with a focus on the historical impact and the various literary genres of movies. Emphasis is placed on an appreciation of film as a form of literature which demonstrates various elements of fiction (character, setting, theme, etc.). Upon completion, students should be able to analyze film critically in various literary contexts.
Prerequisites: ENG 113 must pass with a grade of "C" or higher.
Corequisites: None. (On Demand)

ENG 241 British Literature I (Coll/Tran) **3 0 0 3**
This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher). Corequisites: None. (F)

ENG 242 British Literature II (Coll/Tran) **3 0 0 3**
This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher). Corequisites: None. (S)

ENG 251 Western World Literature I (Coll/Tran) **3 0 0 3**
This course provides a survey of selected European works from the Classical period through the Renaissance. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher). Corequisites: None. (F)

ENG 252 Western World Literature II (Coll/Tran) **3 0 0 3**
This course provides a survey of selected European works from the Neoclassical period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher).
Corequisites: None. (On demand)

ENG 273 African-American Literature (Coll/Tran) **3 0 0 3**
This course provides a survey of the development of African-American literature from its beginnings to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher). Corequisites: None.

ENG 275 Science Fiction (Coll/Tran) **3 0 0 3**
This course covers the relationships between science and literature through analysis of short stories and novels. Emphasis is placed on scientific discoveries that shaped Western culture and our changing view of the universe as reflected in science fiction literature. Upon completion, students should be able to trace major themes and ideas and illustrate relationships between science, worldview, and science fiction literature.
Prerequisites: ENG 112 **or** ENG 113 **or** ENG 114 (must pass with a grade of "C" or higher). Corequisites: None.

ENTREPRENEURSHIP

ETR 215 Law for Entrepreneurs **3 0 0 3**
This course introduces students to basic legal concepts specifically relevant to a business start-up venture. Topics include bailments and documents of title, nature and form of sales, risk and property rights, obligations and performance, business organizations, and agency and employment. Upon completion, students should be able to assess the legal responsibilities of a business start-up.
Prerequisites: None. Corequisites: None. (S)

ETR 220 Innovation and Creativity **3 0 0 3**
This course provides a study of developing and enhancing individual and organizational creativity and innovation. Topics include that innovation needs to be applied to products, services, and processes to increase competitive advantages and add value to businesses. Upon completion, students should be able to apply innovation and creativity principles in the work place.
Prerequisites: None. Corequisites: None. (F)

ETR 230 Entrepreneur Marketing **3 0 0 3**
This course covers the techniques to correctly research and define the target market to increase sales for start up businesses or to expand current businesses. Topics include how to target market and meet customers' needs with a limited budget in the early stages of the life of a start up business. Upon completion, students should be able to demonstrate an understanding of how to correctly target market for a start-up business with limited resources.
Prerequisites: None. Corequisites: None. (F)

ETR 240 Funding for Entrepreneurs **3 0 0 3**
This course provides a focus on the financial issues and needs confronting entrepreneurs attempting to grow their businesses by attracting startup and growth capital. Topics include sources of funding including: angel investors, venture capital, IPO's, private placement, banks, suppliers, buyers, partners, and the government. Upon completion, students should be able to demonstrate an understanding of how to effectively finance a business venture.
Prerequisites: ACC 120. Corequisites: None. (S)

ETR 270 Entrepreneurship Issues **3 0 0 3**
This course introduces current and emerging entrepreneurship issues and opportunities. Topics include franchising, import/export, small business taxes, legal structures, negotiations, contract management, and time management. Upon completion, students should be able to apply a variety of analytical and decision-making requirements to start a new business.
Prerequisites: None. Corequisites: None. (S)

FIRE PROTECTION

FIP 120 Intro to Fire Protection **3 0 0 3**
This course provides an overview of the history, development, methods, systems, and regulations as they apply to the fire protection field. Topics include history, evolution, statistics, suppression, organizations, careers, curriculum, and other related topics. Upon completion, students should be able to demonstrate a broad understanding of the fire protection field.
Prerequisites: None. Corequisites: None. (F)

FIP 124 Fire Prevention & Public Ed **3 0 0 3**
This course introduces fire prevention concepts as they relate to community and industrial operations. Topics include the development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group, meeting NFPA 1021.
Prerequisites: None. Corequisites: None. (F)

FIP 128 Detection & Investigation **3 0 0 3**
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, meeting NFPA 1021.
Prerequisites: None. Corequisites: None. (F)

FIP 132 Building Construction **3 0 0 3**
This course covers the principles and practices related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse, and other related topics. Upon completion, students should be able to understand and recognize various types of construction as related to fire conditions meeting NFPA 1021.
Prerequisites: None. Corequisites: None. (F)

FIP 136 Inspections & Codes **3 0 0 3**
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.
Prerequisites: None. Corequisites: None. (S)

FIP 144 Sprinklers & Auto Alarms 2 2 0 3
This course introduces various types of automatic sprinklers, standpipes, and fire alarm systems. Topics include wet or dry systems, testing and maintenance, water supply requirements, fire detection and alarm systems, and other related topics. Upon completion, students should be able to demonstrate a working knowledge of various sprinkler and alarm systems and required inspection and maintenance.
Prerequisites: None. Corequisites: None. (S)

FIP 148 Fixed & Port Exting Sys 2 2 0 3
This course provides a study of various types of fixed and portable extinguishing systems, their operation, installation, and maintenance. Topics include applications, testing, and maintenance of Halon, carbon dioxide, dry chemical, and special extinguishing agents in fixed and portable systems. Upon completion, students should be able to identify various types of fixed and portable systems, including their proper application and maintenance.
Prerequisites: None. Corequisites: None. (F)

FIP 152 Fire Protection Law 3 0 0 3
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.
Prerequisites: None. Corequisites: None. (S)

FIP 220 Fire Fighting Strategies 3 0 0 3
This course provides preparation for command of initial incident operations involving emergencies within both the public and private sector. Topics include incident management, fire-ground tactics and strategies, incident safety, and command/control of emergency operations. Upon completion, students should be able to describe the initial incident system related to operations involving various emergencies in fire/non-fire situations, meeting NFPA 1021.
Prerequisites: None. Corequisites: None. (F)

FIP 224 Fire Instructor I & II 4 0 0 4
This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communication, and other related topics. Upon completion, students should be able to meet all requirements of NFPA 1041 and NFPA 1021.
Prerequisites: None. Corequisites: None. (S)

FIP 228 Local Govt Finance 3 0 0 3
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.
Prerequisites: None. Corequisites: None. (S)

FIP 229 Fire Dynamics and Combust 3 0 0 3
This course covers the theories and fundamentals of how and why fires start and spread, and how they are safely controlled. Topics include components of fire, fire sources, fire behavior, properties of combustible solids, classification of hazards, and the use of fire extinguishing agents. Upon completion, students should be able to describe the properties of matter and dynamics of fire, identify fuel sources, and compare suppressants and extinguishment techniques.
Prerequisites: None. Corequisites: None. (S)

FIP 230 Chem of Hazardous Mat I 5 0 0 5
This course covers the evaluation of hazardous materials. Topics include use of the periodic table, hydrocarbon derivatives, placards and labels, parameters of combustion, and spill and leak mitigation. Upon completion, students should be able to demonstrate knowledge of the chemical behavior of hazardous materials.
Prerequisites: None. Corequisites: None. (S)

FIP 236 Emergency Management 3 0 0 3
This course covers the four phases of emergency management: mitigation, preparedness, response, and recovery. Topics include organizing for emergency management, coordinating for community resources, public sector liability, and the roles of government agencies at all levels. Upon completion, students should be able to demonstrate a knowledge of comprehensive emergency management and the integrated emergency management system.
Prerequisites: None. Corequisites: None. (F)

FIP 240 Fire Service Supervision 3 0 0 3
This course covers supervisory skills and practices in the fire protection field. Topics include the supervisor's job, supervision skills, the changing work environment, managing change, organizing for results, discipline and grievances, and safety. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of effective fire service supervision, meeting elements of NFPA 1021.
Prerequisites: None. Corequisites: None. (S)

FIP 248 Fire Svc Personnel Adm 3 0 0 3
This course covers the basics of setting up and administering the personnel functions of fire protection organizations. Emphasis is placed on human resource planning, classification and job analysis, equal opportunity employment, affirmative action, recruitment, retention, development, performance evaluation, and assessment centers. Upon completion, students should be able to demonstrate knowledge of the personnel function as it relates to managing fire protection.
Prerequisites: None. Corequisites: None. (S)

FIP 276 Managing Fire Services 3 0 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.
Prerequisites: None. Corequisites: None. (F)

FILM AND VIDEO PRODUCTION

FVP 220 Editing I 2 3 0 3
This course covers film and video editing from traditional methods to digital non-linear systems and basic film lab and transfer facility procedures. Topics include terminology, technologies, aesthetics, basic picture-only editing skills; and the editor's role augmented by hands-on experience. Upon completion, students should be able to use editing equipment and basic digitizing, logging, and picture only editing skills.
Prerequisites: None. Corequisites: None. (On demand)

FRENCH

FRE 111 Elementary French I (Coll/Tran) **3 0 0 3**
This course introduces the fundamental elements of the French language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.
Prerequisites: None. Corequisites: FRE 181. (F)

FRE 112 Elementary French II (Coll/Tran) **3 0 0 3**
This course is a continuation of FRE 111 focusing on the fundamental elements of the French language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate further cultural awareness.
Prerequisites: FRE 111 must pass with a grade of "C" or higher.
Corequisites: FRE 182. (S)

FRE 181 French Lab 1 (Coll/Tran) **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.
Prerequisites: None. Corequisites: FRE 111. (F)

FRE   182   French Lab 2 (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate cultural awareness.
Prerequisites: FRE 181 must pass with a grade of "C" or higher.
Corequisites: FRE 112. (S)

FRE   211   Intermediate French I (Coll/Tran)   **3 0 0 3**
This course provides a review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: FRE 112 must pass with a grade of "C" or higher.
Corequisites: FRE 281. (On demand)

FRE   212   Intermediate French II (Coll/Tran)   **3 0 0 3**
This course is a continuation of FRE 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: FRE 211 must pass with a grade of "C" or higher.
Corequisites: FRE 282. (On demand)

FRE   281   French Lab 3 (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: FRE 182 must pass with a grade of "C" or higher.
Corequisites: FRE 211. (On demand)

FRE   282   French Lab 4 (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: FRE 281 must pass with a grade of "C" or higher.
Corequisites: FRE 212. (On demand)

GEOLOGY

GEL   111   Introductory Geology (Coll/Tran)   **3 2 0 4**
This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** appropriate placement test scores. Corequisites: RED 090; **or** appropriate placement test scores. (F,S)

GEL   113   Historical Geology (Coll/Tran)   **3 2 0 4**
This course covers the geological history of the earth and its life forms. Emphasis is placed on the study of rock strata, fossil groups, and geological time. Upon completion, students should be able to identify major fossil groups and associated rock strata and approximate ages of geological formations.
Prerequisites: GEL 111 **or** GEL 120 (must pass with a grade of "C" or higher).
Corequisites: None.

GEL   120   Physical Geology (Coll/Tran)   **3 2 0 4**
This course provides a study of the structure and composition of the earth's crust. Emphasis is placed on weathering, erosional and depositional processes, mountain building forces, rocks and minerals, and structural changes. Upon completion, students should be able to explain the structure, composition, and formation of the earth's crust.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** appropriate placement test score; RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S,On demand)

GEL   220   Marine Geology (Coll/Tran)   **3 2 0 4**
This course presents a detailed examination of coastal and sea floor geology. Emphasis is placed on coastal and sea floor landforms and processes that shape these features. Upon completion, students should be able to describe the origin and evolution of both coastal and sea floor landforms.
Prerequisites: GEL 111 **or** GEL 120. Corequisites: None. (On demand)

GEL   230   Environmental Geology (Coll/Tran)   **3 2 0 4**
This course provides insights into geologic forces that cause environmental changes influencing man's activities. Emphasis is placed on natural hazards and disasters caused by geologic forces. Upon completion, students should be able to relate major hazards and disasters to the geologic forces responsible for their occurrence.
Prerequisites: GEL 111 **or** GEL 120 **or** PHS 130 (must pass with a grade of "C" or higher); RED 090 **or** appropriate placement test score.
Corequisites: None. (S)

GEOGRAPHY

GEO   111   World Regional Geography (Coll/Tran)   **3 0 0 3**
This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships.
Prerequisites: RED 090 **or** appropriate placement test score. Corequisites: None. (F, S)

GEO   112   Cultural Geography (Coll/Tran)   **3 0 0 3**
This course is designed to explore the diversity of human cultures and to describe their shared characteristics. Emphasis is placed on the characteristics, distribution, and complexity of earth's cultural patterns. Upon completion, students should be able to demonstrate an understanding of the differences and similarities in human cultural groups.
Prerequisites: RED 090 **or** appropriate placement test score. Corequisites: None. (On demand)

GEO   113   Economic Geography (Coll/Tran)   **3 0 0 3**
This course covers the patterns and networks of economic interdependence and how they affect human populations. Emphasis is placed on the economic aspects of the production and distribution of goods and services and their impact on the quality of human life. Upon completion, students should be able to describe different economic systems and demonstrate an understanding of the variables that influence economic development
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: MAT 070 **or** appropriate placement test score. (On demand)

GEO   121   North Carolina Geography (Coll/Tran)   **3 0 0 3**
This course is a survey of the physical and cultural landscapes of North Carolina. Topics include physical characteristics of North Carolina, settlement patterns, resource use, and cultural variations. Upon completion, students should be able to demonstrate knowledge of the distinct physical and cultural features of North Carolina.
Prerequisites: None. Corequisites: None. (On demand)

GEO   130   General Physical Geography (Coll/Tran) **3 0 0 3**
This course introduces both the basic physical components that help shape the earth and the study of minerals, rocks, and evolution of landforms. Emphasis is placed on the geographic grid, cartography, weather, climate, mineral composition, fluvial processes, and erosion and deposition. Upon completion, students should be able to identify these components and processes and explain how they interact.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

GERMAN

GER 111 Elementary German I (Coll/Tran) **3 0 0 3**
This course introduces the fundamental elements of the German language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness.
Prerequisites: None. Corequisites: GER 181. (On demand)

GER 112 Elementary German II (Coll/Tran) **3 0 0 3**
This course is a continuation of GER 111 focusing on the fundamental elements of the German language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate further cultural awareness.
Prerequisites: GER 111 must pass with a grade of "C" or higher.
Corequisites: GER 182. (On demand)

GER 181 German Lab 1 (Coll/Tran) **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness.
Prerequisites: None. Corequisites: GER 111. (On demand)

GER 182 German Lab 2 (Coll/Tran) **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate cultural awareness.
Prerequisites: GER 181 must pass with a grade of "C" or higher.
Corequisites: GER 112. (On demand)

GRAPHIC ARTS

GRA 121 Graphic Arts I **2 4 0 4**
This course introduces terminology, tools and materials, procedures, and equipment used in graphic arts production. Topics include copy preparation and pre-press production relative to printing. Upon completion, students should be able to demonstrate an understanding of graphic arts production.
Prerequisites: None. Corequisites: None. (F)

GRA 151 Computer Graphics I **1 3 0 2**
This course introduces the use of hardware and software for production and design in graphic arts. Topics include graphical user interface and current industry uses such as design, layout, typography, illustration, and imaging for production. Upon completion, students should be able to understand and use the computer as a fundamental design and production tool.
Prerequisites: None. Corequisites: None. (F)

GRA 152 Computer Graphics II **1 3 0 2**
This course covers advanced design and layout concepts utilizing illustration, page layout, and imaging software in graphic arts. Emphasis is placed on enhancing and developing the skills that were introduced in GRA 151. Upon completion, students should be able to select and utilize appropriate software for design and layout solutions.
Prerequisites: GRA 151. Corequisites: None. (S)

GRA 153 Computer Graphics III **1 3 0 2**
This course is a continuation of GRA 152. Emphasis is placed on advanced computer graphics hardware and software applications. Upon completion, students should be able to demonstrate competence in selection and utilization of appropriate software for specialized applications.
Prerequisites: GRA 152. Corequisites: None. (F)

GRA 221 Graphic Arts II **2 4 0 4**
This course is a continuation of GRA 121. Topics include multi-color image preparation, pre-press production, control of close/hairline register in image assembly and press operation, and post-press procedures. Upon completion, students should be able to demonstrate competence in all phases of graphic arts production.
Prerequisites: GRA 121 **and** GRA 151. Corequisites: None. (S)

GRA 245 Printing Sales/Service **3 0 0 3**
This course covers the operation of a sales, marketing, and service program for a printing company or printing supplier. Topics include marketing, prospecting, telephone sales, customer service, order entry, closing the sale, and answering objections. Upon completion, students should be able to understand the operation of sales and service in printing and printing supply organizations.
Prerequisites: None. Corequisites: None. (On demand)

GRA 252 Imaging Techniques **1 4 0 3**
This course covers electronic imaging and transfer and display of digital images through various media. Topics include analysis of electronic imaging, including uses, medium, outcome, storage, and display hardware and software. Upon completion, students should be able to demonstrate an understanding of electronic imaging techniques and purposes and complete related assignments.
Prerequisites: GRA 151 **or** GRD 151. Corequisites: None. (F)

GRA 255 Image Manipulation I **1 3 0 2**
This course covers applications associated with electronic image manipulation, including color correction, color separation, special effects, and image conversion. Topics include image-capturing hardware, image-processing software, and output options. Upon completion, students should be able to utilize hardware and software to acquire, manipulate, and output images to satisfy design and production.
Prerequisites: GRA 151 **or** GRD 151. Corequisites: None. (S)

GRA 256 Image Manipulation II **1 3 0 2**
This course covers electronic color separation and its relationship to multi-color printing. Topics include color theory, separation, color matching, proofing, and output of process and spot color images. Upon completion, students should be able to use hardware and image processing software to produce color separations and proofs for various printing processes.
Prerequisites: GRA 255. Corequisites: None. (F)

GRAPHIC DESIGN

GRD 110 Typography I **2 2 0 3**
This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.
Prerequisites: None. Corequisites: GRD 121. (F)

GRD 121 Drawing Fundamentals I **1 3 0 2**
This course increases observation skills using basic drawing techniques and media in graphic design. Emphasis is placed on developing the use of graphic design principles, media applications, spatial considerations, drawing styles, and approaches. Upon completion, students should be able to show competence and proficiency in finished works.
Prerequisites: None. Corequisites: GRD 110. (F)

GRD 131 Illustration I **1 3 0 2**
This course introduces the application of rendering techniques to create illustrations. Emphasis is placed on controlling various media, methods, surfaces, design problems, and the appropriate media selection process. Upon completion, students should be able to produce quality illustrations from conception through finished artwork. The course will concentrate on technique, and subject matter will include product, architecture and fashion.
Prerequisites: GRD 121. Corequisites: None. (S)

GRD 141   Graphic Design I   2 4 0 4
This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.
Prerequisites: None. Corequisites: None. (F)

GRD 142   Graphic Design II   2 4 0 4
This course covers the application of visual elements and design principles in advertising and graphic design. Topics include creation of various designs, such as logos, advertisements, posters, outdoor advertising, and publication design. Upon completion, students should be able to effectively apply design principles and visual elements to projects.
Prerequisites: GRD 141. Corequisites: None. (S)

GRD 180   Interactive Design   1 4 0 3
This course covers skills and techniques used in designing interactive presentations. Emphasis is placed on design, including interface design, color, illustration, scripting, audio, typography, and animated elements. Upon completion, students should be able to design and produce interactive presentations.
Prerequisites: GRD 151 **or** GRA 151. Corequisites: None. (S)

GRD 241   Graphic Design III   2 4 0 4
This course is an advanced exploration of various techniques and media for advertising and graphic design. Emphasis is placed on advanced concepts and solutions to complex and challenging graphic design problems. Upon completion, students should be able to demonstrate competence and professionalism in visual problem solving.
Prerequisites: GRD 142. Corequisites: None. (F)

GRD 249   Advanced Design Practice   1 9 0 4
This course covers advanced techniques used in graphic design. Emphasis is placed on providing solutions to complex design problems. Upon completion, students should be able to demonstrate advanced levels of competence and professionalism in visual problem solving.
Prerequisites: GRD 241. Corequisites: None. (S)

GRD 265   Digital Print Production   1 4 0 3
This course covers preparation of digital files for output and reproduction. Emphasis is placed on output options, separations, color proofing, and cost and design considerations. Upon completion, students should be able to prepare files and select appropriate output methods for design solutions.
Prerequisites: GRA 151, GRA 152. Corequisites: None. (F)

GRD 271   Multimedia Design I   1 3 0 2
This course introduces the fundamentals of multimedia design and production for computer-related presentations. Topics include interface design, typography, storyboarding, scripting, simple animation, graphics, digital audiovideo, and copyright issues. Upon completion, students should be able to design and produce multimedia presentations.
Prerequisites: GRA 151 **or** GRD 151. Corequisites: None. (F)

GRD 280   Portfolio Design   2 4 0 4
This course covers the organization and presentation of a design/advertising or graphic art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume' and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.
Prerequisites: GRA 152, GRD 142, **and** permission of instructor.
Corequisites: None. (S)

HEALTH

HEA 110   Personal Health/Wellness (Coll/Tran)   **3 0 0 3**
This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness.
Prerequisites: None. Corequisites: None. (F,S)

HEA 112   First Aid & CPR (Coll/Tran)   **1 2 0 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.
Prerequisites: None. Corequisites: None. (F, or on demand)

HEA 120   Community Health (Coll/Tran)   **3 0 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.
Prerequisites: None. Corequisites: None. (F,S)

HISTORY

HIS 111   World Civilizations I (Coll/Tran)   **3 0 0 3**
This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations.
Prerequisites: None. Corequisites: None. (On demand)

HIS 112   World Civilizations II (Coll/Tran)   **3 0 0 3**
This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations.
Prerequisites: None. Corequisites: None. (On demand)

HIS 121   Western Civilization I (Coll/Tran)   **3 0 0 3**
This course introduces western civilization from pre-history to the early modern era. Topics include ancient Greece, Rome, and Christian institutions of the Middle Ages and the emergence of national monarchies in western Europe. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early western civilization.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (F,SU, and On demand)

HIS 122   Western Civilization II (Coll/Tran)   **3 0 0 3**
This course introduces western civilization from the early modern era to the present. Topics include the religious wars, the Industrial Revolution, World Wars I and II, and the Cold War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern western civilization.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (S,SU, and On demand)

HIS 131   American History I (Coll/Tran)   **3 0 0 3**
This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (F, and On demand)

HIS 132   American History II (Coll/Tran)   **3 0 0 3**
This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and social conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (S, and On demand)

HIS 141 Genealogy & Local History (Coll/Tran) **3 0 0 3**
This course explores the role of the local or family historian. Emphasis is placed on historical or genealogical research techniques including a survey of local, state, and national archival resources. Upon completion, students should be able to conduct genealogical research and do a major research project on local or family history.
Prerequisites: None. Corequisites: None. (On demand)

HIS 145 The Second World War (Coll/Tran) **3 0 0 3**
This course covers the period of the Second World War from 1919 to 1945. Topics include the Treaty of Versailles, the rise of totalitarian regimes, the origins of the war, the major military campaigns in Europe and the Pacific, and the aftermath. Upon completion, students should be able to analyze significant political, military, socioeconomic, and cultural developments that influenced the Second World War.
Prerequisites: None. Corequisites: None. (F)

HIS 151 Hispanic Civilization (Coll/Tran) **3 0 0 3**
This course surveys the cultural history of Spain and its impact on the New World. Topics include Spanish and Latin American culture, literature, religion, and the arts. Upon completion, students should be able to analyze the cultural history of Spain and Latin America.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

HIS 161 Science and Technology (Coll/Tran) **3 0 0 3**
This course examines the history of science and technology from pre-history to the present. Topics include the origins, impact, and consequences of scientific and technological developments. Upon completion, students should be able to analyze significant developments in the history of science and technology.
Prerequisites: None. Corequisites: None.

HIS 162 Women and History (Coll/Tran) **3 0 0 3**
This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history.
Prerequisites: None. Corequisites: None. (S)

HIS 211 Ancient History (Coll/Tran) **3 0 0 3**
This course traces the development of the cultural, intellectual, and political foundations of western civilization. Topics include the civilizations of the Near East, the classical Greek and Hellenistic eras, the Roman world, Judaism, and Christianity. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the ancient world.
Prerequisites: None. Corequisites: None. (F,S)

HIS 221 African-American History (Coll/Tran) **3 0 0 3**
This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

HIS 226 The Civil War (Coll/Tran) **3 0 0 3**
This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War.
Prerequisites: None. Corequisites: None. (S)

HIS 227 Native American History (Coll/Tran) **3 0 0 3**
This course surveys the history and cultures of Native Americans from pre-history to the present. Topics include Native American civilizations, relations with Europeans, and the continuing evolution of Native American cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments among Native Americans.
Prerequisites: None. Corequisites: None. (On demand)

HIS 228 History of the South (Coll/Tran) **3 0 0 3**
This course covers the origin and development of the South as a distinct region of the United States. Emphasis is placed on Southern identity and its basis in cultural, social, economic, and political developments during the 19th and 20th centuries. Upon completion, students should be able to identify and analyze the major cultural, social, economic, and political developments in the South.
Prerequisites: None. Corequisites: None. (On demand)

HIS 232 History of the Old West (Coll/Tran) **3 0 0 3**
This course surveys the development of the western United States. Emphasis is placed on Native American cultures, Manifest Destiny, conflicts on the frontier, and subsequent developments. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the western United States.
Prerequisites: None. Corequisites: None.

HIS 236 North Carolina History (Coll/Tran) **3 0 0 3**
This course is a study of geographical, political, economic, and social conditions existing in North Carolina from America's discovery to the present. Topics include native and immigrant backgrounds; colonial, antebellum, and Reconstruction periods; party politics; race relations; and the transition from an agrarian to an industrial economy. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in North Carolina.
Prerequisites: None. Corequisites: None. (S)

HIS 261 East Asian History (Coll/Tran) **3 0 0 3**
This course surveys the history of China and Japan from the development of civilization in Asia to the present. Emphasis is placed on the evaluation of social, political, economic, and governmental structures in China and Japan. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in east Asia.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

HEALTH INFORMATION TECHNOLOGY

HIT 110 Fundamentals of HIM **3 0 0 3**
This course introduces Health Information Management (HIM) and its role in healthcare delivery systems. Topics include standards, regulations, and initiatives; payment and reimbursement systems, healthcare providers and disciplines, and EHRs. Upon completion, the student should be able to demonstrate an understanding of health information management and healthcare organizations, professions, and trends.
Prerequisites: None. Corequisites: None. (F)

HIT 112 Health Law and Ethics **3 0 0 3**
This course covers legislative and regulatory processes, legal terminology, and professional-related and practice-related ethical issues. Topics include confidentiality; privacy and security policies, procedures and monitoring; release of information policies and procedures; and professional-related and practice-related ethical issues. Upon completion, students should be able to apply policies and procedures for access and disclosure of Protected Health Information and apply and promote ethical standards.
Prerequisites: None. Corequisites: None. (F,S)

HIT 114 Health Data Sys/Standards **2 3 0 3**
This course covers concepts and techniques for managing and maintaining manual and electronic health records (EHR). Topics include structure and use of health information including data collection and analysis, data sources and sets, archival systems, quality and integrity of healthcare data. Upon completion, students should be able to monitor and apply system-wide clinical documentation guidelines and comply with regulatory standards.
Prerequisites: None. Corequisites: None. (S)

HIT 122 Prof Practice Exp I **0 0 3 1**
This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.
Prerequisites: HIT 112, HIT 114. Corequisites: None. (SU)

HIT   124   Prof Practice Exp II   0 0 3 1
This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.
Prerequisites: HIT 122. Corequisites: None. (F,S)

HIT   210   Healthcare Statistics   2 2 0 3
This course covers maintenance, compilation, analysis, and presentation of healthcare statistics and research protocols and techniques. Topics include basic statistical principles, indices, databases, registries, vital statistics, descriptive statistics, research protocol monitoring, Institutional Review Board processes, and knowledge-based research techniques. Upon completion, students should be able to apply, interpret, and present healthcare statistics and utilize research techniques to gather and interpret healthcare data.
Prerequisites: MAT 115, MAT 140, **or** MAT 161 & MAT 161A.
Corequisites: None. (F)

HIT   211   ICD Coding   2 6 0 4
This course covers ICD diagnostic and procedural coding conventions and guidelines for inpatient, outpatient and ambulatory care. Emphasis is placed on a comprehensive application of anatomy, physiology and interrelationships among organ systems. Upon completion, students should be able to accurately assign and sequence diagnostic and procedural codes for statistical, patient outcomes, reimbursement purpose.
Prerequisites: BIO 165 & BIO 166, **or** BIO 168 & BIO 169; MED 121, MED 122.
Corequisites: None. (F)

HIT   214   CPT/Other Coding Systems   1 3 0 2
This course covers application of principles and guidelines of CPT/HCPCS coding. Topics include clinical classification/nomenclature systems such as SNOMED, DSM, ICD-O and the use of encoders. Upon completion, students should be able to apply coding principles to correctly assign CPT/HCPCS codes.
Prerequisites: HIT 211. Corequisites: None. (S)

HIT   215   Reimbursement Methodology   1 2 0 2
This course covers reimbursement methodologies used in all healthcare settings as they relate to national billing, compliance, and reporting requirements. Topics include prospective payment systems, billing process and procedures, chargemaster maintenance, regulatory guidelines, reimbursement monitoring, and compliance strategies and reporting. Upon completion, students should be able to perform data quality reviews to validate code assignment and comply with reimbursement and reporting requirements.
Prerequisites: HIT 211. Corequisites: None. (S)

HIT   216   Quality Management   1 3 0 2
This course introduces principles of quality assessment and improvement, and utilization, risk, and case management, in healthcare. Topics include Continuous Quality Improvement, and case management processes, data analysis/reporting techniques, credentialing, regulatory quality monitoring requirements, and outcome measures and monitoring. Upon completion, students should be able to abstract, analyze, and report clinical data for facility-wide quality management/performance improvement programs and monitor compliance measures.
Prerequisites: HIT 114. Corequisites: None. (F)

HIT   220   Health Informatics & EHRs   1 2 0 2
This course covers electronic health information (EHR) systems design, implementation, and application. Topics include EHR, informatics, speech & imaging technology, information/network security & integrity, data dictionaries, modeling and warehousing. Upon completion, students should be able to facilitate usage of electronic health record systems and other technologies.
Prerequisites: HIT 114; CIS 110 **or** CIS 111. Corequisites: None. (F)

HIT   222   Prof Practice Exp III   0 0 6 2
This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.
Prerequisites: HIT 122. Corequisites: None. (S)

HIT   226   Principles of Disease   3 0 0 3
This course covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. Topics include basic microbiology, basic pharmacology, and principles of disease. Upon completion, students should be able to relate disease processes to etiology, physical signs and symptoms, prognosis, and common complications and their management.
Prerequisites: BIO 169. Corequisites: None. (F)

HIT   280   Professional Issues   2 0 0 2
This course provides a comprehensive discussion of topics common to the health information profession. Emphasis is placed on application of professional competencies, job search tools, and preparation for the certification examination. Upon completion, students should be able to demonstrate competence in entry-level domains and subdomains for health information technologies.
Prerequisites: HIT 211. Corequisites: HIT 214. (S)

HEALTHCARE MANAGEMENT

HMT   110   Intro to Healthcare Mgt   3 0 0 3
This course introduces the functions, practices, organizational structures, and professional issues in healthcare management. Emphasis is placed on planning, controlling, directing, and communicating within health and human services organizations. Upon completion, students should be able to apply the concepts of management within a healthcare service environment.
Prerequisites: None. Corequisites: None. (F,S)

HMT   210   Medical Insurance   3 0 0 3
This course introduces the concepts of medical insurance. Topics include types and characteristics of third-party payers, coding concepts, payment systems, and manual/electronic claims form preparation. Upon completion, students should be able to process third-party claims forms.
Prerequisites: MED 122 **or** OST 142.   Corequisites: None. (S)

HMT   211   Long-Term Care Admin   3 0 0 3
This course introduces the administration of long-term care facilities and services. Emphasis is placed on nursing home care, home health care, hospice, skilled nursing facilities, and other long-term care services. Upon completion, students should be able to administer state and national standards and regulations as they apply to long-term care.
Prerequisites: HMT 110. Corequisites: None. (F)

HMT   212   Mgt of Healthcare Org   3 0 0 3
This course examines current issues affecting the management of healthcare delivery systems. Topics include current problems, changes, and challenges in the healthcare environment. Upon completion, students should be able to identify current health care issues and their impact on healthcare management.
Prerequisites: HMT 110. Corequisites: None. (F)

HMT   220   Healthcare Financial Mgmt   4 0 0 4
This course covers the methods and techniques utilized in the financial management of healthcare programs. Topics include cost determination, pricing of services, financial statement analysis, forecasting/projections, third-party billing, reimbursement, Medicare, Medicaid, and budgeting. Upon completion, students should be able to interpret and apply the principles of financial management in a healthcare environment.
Prerequisites: HMT 110, ACC 121. Corequisites: None. (S)

HMT   225   Practice Mgmt. Simulation   2 2 0 3
This course introduces medical systems used to process and analyze information in the automated office. Emphasis is placed on daily processing of patient services, management reporting used to monitor productivity, and interactive database reporting and analysis. Upon completion, students should be able to process daily services, generate and interpret management reports and utilize key indicators for monitoring practice productivity.
Prerequisites : HMT 210. Corequisites : HMT 220. (S)

HORTICULTURE

HOR 110   Intro to Landscaping   1 2 0 2
This course introduces the basic skills and concepts of drafting and surveying necessary to complete landscape site analysis and topographical drawings. Emphasis is placed on proper use of drafting and survey equipment. Upon completion, students should be able to draw a site analysis drawing with topographical lines.
Prerequisites: None. Corequisites: None. (F,S)

HOR 112   Landscape Design I   2 3 0 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.
Prerequisites: None. Corequisites: None. (SU)

HOR 114   Landscape Construction   2 2 0 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.
Prerequisites: None. Corequisites: None. (SU)

HOR 116   Landscape Management I   2 2 0 3
This course covers information and skills necessary to analyze a property and develop a management schedule. Emphasis is placed on property measurement, plant condition, analysis of client needs, and plant culture needs. Upon completion, students should be able to analyze a property, develop management schedules, and implement practices based on client needs.
Prerequisites: None. Corequisites: None. (S)

HOR 118   Equipment Op & Maint   1 3 0 2
This course covers the proper operation and maintenance of selected equipment used in horticulture. Emphasis is placed on the maintenance, minor repairs, safety devices, and actual operation of selected equipment. Upon completion, students should be able to design a maintenance schedule, service equipment, and demonstrate safe operation of selected equipment.
Prerequisites: None. Corequisites: None. (F,S)

HOR 124   Nursery Operations   2 3 0 3
This course covers nursery site and crop selection, cultural practices, and production and marketing methods. Topics include site considerations, water availability, equipment, irrigation, fertilization, containers, media, and pest control. Upon completion, students should be able to design and implement a nursery operation and grow and harvest nursery crops.
Prerequisites: None. Corequisites: None. (On demand)

HOR 134   Greenhouse Operations   2 2 0 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.
Prerequisites: None. Corequisites: None. (F)

HOR 160   Plant Materials I   2 2 0 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.
Prerequisites: None. Corequisites: None. (S)

HOR 162   Applied Plant Science   2 2 0 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.
Prerequisites: None. Corequisites: None. (F)

HOR 164   Hort Pest Management   2 2 0 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.
Prerequisites: None. Corequisites: None. (S,SU)

HOR 166   Soils & Fertilizers   2 2 0 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.
Prerequisites: None. Corequisites: None. (F)

HOR 168   Plant Propagation   2 2 0 3
This course is a study of sexual and asexual reproduction of plants. Emphasis is placed on seed propagation, grafting, stem and root propagation, micropropagation, and other propagation techniques. Upon completion, students should be able to successfully propagate ornamental plants.
Prerequisites: None. Corequisites: None. (S)

HOR 170   Hort Computer Apps   1 3 0 2
This course introduces computer programs as they apply to the horticulture industry. Emphasis is placed on applications of software for plant identification, design, and irrigation. Upon completion, students should be able to use computer programs in horticultural situations.
Prerequisites: None. Corequisites: None. (F)

HOR 213   Landscape Design II   2 2 0 3
This course covers residential and commercial landscape design, cost analysis, and installation. Emphasis is placed on job cost estimates, installation of the landscape design, and maintenance techniques. Upon completion, students should be able to read landscape design blueprints, develop cost estimates, and implement the design.
Prerequisites: HOR 112. Corequisites: None. (F)

HOR 215   Landscape Irrigation   2 2 0 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.
Prerequisites: None. Corequisites: None. (F,SU)

HOR 255   Interiorscapes   1 2 0 2
This course covers plant selection, design, and management for interior settings. Topics include tropical plant identification, cultural requirements, insect and disease identification and control, and design and management requirements for interior plants. Upon completion, students should be able to design, install, and manage plants in interior settings.
Prerequisites: None. Corequisites: None. (On demand)

HOR 260   Plant Materials II   2 2 0 3
This course covers important landscape plants. Emphasis is placed on identification, plant nomenciature, 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.
Prerequisites: None. Corequisites: None. (SU)

HOR 265   Adv Plant Materials   1 2 0 2
This course covers important landscape plants. Emphasis is placed on identification, plant nomenclature, growth characteristics, cultural requirements, and landscape uses. Upon completion, students should be able to correctly select plants for specific landscape uses.
Prerequisites: None. Corequisites: None. (S)

HOR 273   Hor Mgmt & Marketing   3 0 0 3
This course covers the steps involved in starting or managing a horticultural business. Topics include financing, regulations, market analysis, employer/employee relations, formulation of business plans, and operational procedures in a horticultural business. Upon completion, students should be able to assume ownership or management of a horticultural business.
Prerequisites: None. Corequisites: None. (F)

HUMANITIES

HUM 110   Technology and Society (Coll/Tran)   **3 0 0 3**
This course considers technological change from historical, artistic, and philosophical perspectives and its effect on human needs and concerns. Emphasis is placed on the causes and consequences of technological change. Upon completion, students should be able to critically evaluate the implications of technology.
Prerequisites: None. Corequisites: None. (F)

HUM 120   Cultural Studies (Coll/Tran)   **3 0 0 3**
This course introduces the distinctive features of a particular culture. Topics include art, history, music, literature, politics, philosophy, and religion. Upon completion, students should be able to appreciate the unique character of the study culture. Prerequisites: None. Corequisites: None.

HUM 211   Humanities I (Coll/Tran)   **3 0 0 3**
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied.
Prerequisites: ENG 111. Corequisites: None. (F)

HUM 220   Human Values and Meaning (Coll/Tran)   **3 0 0 3**
This course presents some major dimensions of human experience as reflected in art, music, literature, philosophy, and history. Topics include the search for identity, the quest for knowledge, the need for love, the individual and society, and the meaning of life. Upon completion, students should be able to recognize interdisciplinary connections and distinguish between open and closed questions and between narrative and scientific models of understanding.
Prerequisites: ENG 111. Corequisites: None. (On demand)

HYDRAULICS AND PNEUMATICS

HYD 110   Hydraulics/Pneumatics I   **2 3 0 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.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisities: None. (On demand)

INDUSTRIAL SCIENCE

ISC   112   Industrial Safety   **2 0 0 2**
This course introduces the principles of industrial safety. Emphasis is placed on industrial safety, OSHA, and environmental regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: None. (F)

JOURNALISM

JOU   110 Intro to Journalism (Coll/Tran)   **3 0 0 3**
This course presents a study of journalistic news, feature, and sports writing. Emphasis is placed on basic news writing techniques and on related legal and ethical issues. Upon completion, students should be able to gather, write, and edit news, feature, and sports articles.
Prerequisites: None. Corequisites: None. (On demand)

MACHINING

MAC 122   CNC Turning   **1 3 0 2**
This course introduces the programming, setup, and operation of CNC turning centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC turning centers.
Prerequisites: MAC 141, RED 080 **or** appropriate placement test score.
Corequisites: None. (S)

MAC 124   CNC Milling   **1 3 0 2**
This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.
Prerequisites: MAC 141, RED 080 **or** appropriate placement test score.
Corequisites: None. (S)

MAC 131   Blueprint Reading/Mach I   **1 2 0 2**
This course covers the basic principles of blueprint reading and sketching. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notations. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.
Prerequisites: CTS 080, DMA 010, DMA 020, DMA 030; RED 080 **or** appropriate placement test score. Corequisites: None. (F)

MAC 132   Blueprint Reading/Mach II   **1 2 0 2**
This course introduces more complex industrial blueprints. Emphasis is placed on auxiliary views, section views, violations of true project, special views, applications of GD & T, and interpretation of complex parts. Upon completion, students should be able to read and interpret complex industrial blueprints.
Prerequisites: MAC 131. Corequisites: None. (S)

MAC 141   Machining Applications I   **2 6 0 4**
This course provides an introduction to a variety of material-working processes that are common to the machining industry. Topics include safety, process-specific machining equipment, measurement devices, set-up and layout instruments, and common shop practices. Upon completion, students should be able to safely demonstrate basic machining operations, accurately measure components, and effectively use layout instruments.
Prerequisites: CTS 080, DMA 010, DMA 020, DMA 030; RED 080 **or** appropriate placement test score. Corequisites: None.

MAC 142   Machining Applications II   **2 6 0 4**
This course provides instruction in the wide variety of processes associated with machining. Topics include safety, equipment set-up, holding fixtures, tooling, cutting speeds and depths, metal properties, and proper finishes. Upon completion, students should be able to safely demonstrate advanced machining operations, accurately measure components, and produce accurate components with a proper finish.
Prerequisites: MAC 141. Corequisites: None.

MAC 143   Machining Appl III   **2 6 0 4**
This course provides instruction in the field of advanced machining. Emphasis is placed on creating complex components, close-tolerance machining, precise measurement, and proper equipment usage. Upon completion, students should be able to demonstrate the ability to produce an accurately machined component with a quality finish using the proper machining process.
Prerequisites: MAC 142. Corequisites: None.

MAC 151   Machining Calculations   **1 2 0 2**
This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.
Prerequisites: CTS 080, DMA 010, DMA 020, DMA 030; RED 080 **or** appropriate placement test score. Corequisites: None

MAC 222   Advanced CNC Turning   1 3 0 2
This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.
Prerequisites: MAC 122. Corequisites: None. (S)

MAC 224   Advanced CNC Milling   1 3 0 2
This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.
Prerequisites: MAC 124. Corequisites: None. (S)

MAC 231   CAM: CNC Turning   1 4 0 3
This course introduces Computer Numerical Control graphics programming and concepts for turning center applications. Emphasis is placed on the interaction of menus to develop a shape file in a graphics CAM system and to develop tool path geometry and part geometry. Upon completion, students should be able to develop a job plan using CAM software, including machine selection, tool selection, operational sequence, speed, feed, and cutting depth.
Prerequisites: MEC 110. Corequisites: None. (F)

MAC 232   CAM: CNC Milling   1 4 0 3
This course introduces Computer Numerical Control graphics programming and concepts for machining center applications. Emphasis is placed on developing a shape file in a graphics CAM system and transferring coded information from CAM graphics to the CNC milling center. Upon completion, students should be able to develop a complete job plan using CAM software to create a multi-axis CNC program.
Prerequisites: MEC 110. Corequisites: None. (F)

MAC 233   Appl in CNC Machining   2 12 0 6
This capstone course provides students the opportunity to apply skills learned throughout the curriculum. Emphasis is placed on production of parts and assemblies using modern CNC machine tools. Upon completion, students should be able to manufacture complex parts using a variety of CNC machine tools.
Prerequisites: MAC 234. Corequisites: None. (S)

MAC 234   Adv Multi-Axis Machin   2 3 0 3
This course includes multi-axis machining using machining centers with multi-axis capabilities. Emphasis is placed on generation of machining center input with a CAM system and setup of pallet changer and rotary system for multi-axis machining fixtures. Upon completion, students should be able to convert CAD to output for multi-axis machining centers, including tooling, setup, and debugging processes.
Prerequisites: MAC 222, MAC 224. Corequisites: None. (S)

MAC 241   Jigs & Fixtures I   2 6 0 4
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.
Prerequisites: MAC 142, MAC 222, MAC 224. Corequisites: None. (F)

MAC 242   Jigs & Fixtures II   1 9 0 4
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.
Prerequisites: MAC 241. Corequisites: None. (S)

MATHEMATICS

(Developmental Mathematics)

DMA 010   Operations With Integers   .75 .50 0 1
This course provides a conceptual study of integers and integer operations. Topics include integers, absolute value, exponents, square roots, perimeter and area of basic geometric figures, Pythagorean theorem, and use of the correct order of operations. Upon completion, students should be able to demonstrate an understanding of pertinent concepts and principles and apply this knowledge in the evaluation of expressions.
Prerequisites: None. Corequisites: None. (F,S,SU)

DMA 020   Fractions and Decimals   .75 .50 0 1
This course provides a conceptual study of the relationship between fractions and decimals and covers related problems. Topics include application of operations and solving contextual application problems, including determining the circumference and area of circles with the concept of pi. Upon completion, students should be able to demonstrate an understanding of the connections between fractions and decimals.
Prerequisites: DMA 010 **or** by placement testing. Corequisites: None. (F,S,SU)

DMA 030   Propor/Ratio/Rate/Percent   .75 .50 0 1
This course provides a conceptual study of the problems that are represented by rates, ratios, percent, and proportions. Topics include rates, ratios, percent, proportion, conversion of English and metric units, and applications of the geometry of similar triangles. Upon completion, students should be able to use their understanding to solve conceptual application problems.
Prerequisites: DMA 010, DMA 020 **or** by placement testing. Corequisites: None. (F,S,SU).

DMA 040   Express/Lin Equat/Inequal   .75 .50 0 1
This course provides a conceptual study of problems involving linear expressions, equations, and inequalities. Emphasis is placed on solving contextual application problems. Upon completion, students should be able to distinguish between simplifying expressions and solving equations and apply this knowledge to problems involving linear expressions, equations, and inequalities.
Prerequisites: DMA 010, DMA 020, DMA 030 **or** by placement testing. Corequisites: None. (F,S,SU)

DMA 050   Graphs/Equations of Lines   .75 .50 0 1
This course provides a conceptual study of problems involving graphic and algebraic representations of lines. Topics include slope, equations of lines, interpretation of basic graphs, and linear modeling. Upon completion, students should be able to solve contextual application problems and represent real-world situations as linear equations in two variables.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040 **or** by placement testing. Corequisites: None. (F,S,SU)

DMA 060   Polynomial/Quadratic Appl   .75 .50 0 1
This course provides a conceptual study of problems involving graphic and algebraic representations of quadratics. Topics include basic polynomial operations, factoring polynomials, and solving polynomial equations by means of factoring. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic applications.
Prerequisites: take DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** by placement testing. Corequisites: None. (F,S,SU).

DMA 070   Rational Express/Equation   .75 .50 0 1
This course provides a conceptual study of problems involving graphic and algebraic representations of rational equations. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060 **or** by placement testing. Corequisites: None. (F,S,SU)

DMA 080   Radical Express/Equations   .75 .50 0 1
This course provides a conceptual study of the manipulation of radicals and the application of radical equations to real-world problems. Topics include simplifying and performing operations with radical expressions and rational exponents, solving equations, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with radical applications.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070 **or** by placement testing. Corequisites: None. (F,S,SU)

(Curriculum Mathematics)

MAT 101   Applied Mathematics I   2 2 0 3
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.
Prerequisites: DMA 010, DMA 020, DMA 030, **or** by placement testing; RED 080 **or** by placement testing. Corequisites: None. (F,S)

MAT 102   Applied Mathematics II   2 2 0 3
This course introduces the concepts of right triangle trigonometry and geometry with emphasis on applications to problem solving. Topics include the basic definitions and properties of plane and solid geometry, area and volume, and right triangle trigonometry. Upon completion, students should be able to solve applied problems both independently and collaboratively.
Prerequisites: MAT 101. Corequisites: None. (S)

MAT 115   Mathematical Models   2 2 0 3
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, function notation, linear functions,   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.
Prerequisites:DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** MAT 121 **or** MAT 161 **or** MAT 171 **or** MAT 175 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: None. (F,S,SU)

MAT 121   Algebra/Trigonometry I   2 2 0 3
This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include 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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** by placement testing; RED 080 **or** by placement testing. Corequisites: None. (F,S)

MAT 122   Algebra/Trigonometry II   2 2 0 3
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.
Prerequisites: MAT 121 (must pass with a grade of "C" or higher) **or** MAT 161 **or** MAT 171 **or** MAT 175. Corequisites: None. (S)

MAT 140   Survey of Mathematics (Coll/Tran)   **3 0 0 3**
This course provides an introduction in a non-technical setting to selected topics in mathematics. Topics may include, but are not limited to, sets, logic, probability, statistics, matrices, mathematical systems, geometry, topology, mathematics of finance, and modeling. Upon completion, students should be able to understand a variety of mathematical applications, think logically, and be able to work collaboratively and independently.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** MAT 121 (must pass with a grade of "C" or higher) **or** MAT 161 **or** MAT 171 **or** MAT 175 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 140A. (F,S,SU)

MAT 140A Survey of Mathematics Lab (Coll/Tran)   **0 2 0 1**
This course is a laboratory for MAT 140. 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.
Prerequisites:DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 **or** MAT 121 (must pass with a grade of "C" or higher) **or** MAT 161 **or** MAT 171 **or** MAT 175 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 140. (F,S,SU)

MAT 151   Statistics I (Coll/Tran)   **3 0 0 3**
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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** MAT 121 **or** MAT 140 (must pass with a grade of "C" or higher); **or** MAT 161 **or** MAT 171 **or** MAT 175 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 151A. (F,S,SU)

MAT 151A Statistics I Lab (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, **or** MAT 121 **or** MAT 140 (must pass with a grade of "C" or higher); **or** MAT 161 **or** MAT 171 **or** MAT 175 **or** by placement testing.
Corequisites: MAT 151.(F,S,SU)

MAT 161   College Algebra (Coll/Tran)   **3 0 0 3**
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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 **or** by placement testing; RED 080 **or** by placement placement testing. Corequisites: MAT 161A. (F,S,SU)

MAT 161A College Algebra Lab (Coll/Tran)   **0 2 0 1**
This course is a laboratory for MAT 161. 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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 161. (F,S,SU)

MAT 171   Precalculus Algebra (Coll/Tran)   **3 0 0 3**
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. (Select only one from the series MAT 171 or MAT 175.)
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 **or** MAT 161 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 171A. (F,S)

MAT 171A Precalculus Algebra Lab (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 **or** MAT 161 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 171. (F, S)

MAT 172   Precalculus Trigonometry (Coll/Tran)   **3 0 0 3**
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, vectors, and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction.
Prerequisites: MAT 171 must pass with a grade of "C" or higher.
Corequisites: MAT 172A. (F, S)

MAT 172A Precalculus Trig Lab (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: MAT 171 must pass with a grade of "C" or higher.
Corequisites: MAT 172. (F,S)

MAT 175   Precalculus (Coll/Tran)   **4 0 0 4**
This course provides an intense study of the topics which are fundamental to the study of calculus. Emphasis is placed on functions and their graphs with special attention to polynomial, rational, exponential, logarithmic and trigonometric functions, and analytic trigonometry. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. (Select only one from the series MAT 171 or MAT 175. Select only one from the series MAT 172 or MAT 175.)
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 175A. (F,S)

MAT 175A Precalculus Lab (Coll/Tran)   **0 2 0 1**
This course is a laboratory for MAT 175. 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.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 080 **or** by placement testing; RED 080 **or** by placement testing. Corequisites: MAT 175. (F,S)

MAT 263   Brief Calculus (Coll/Tran)   **3 0 0 3**
This course is designed for students needing only 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 understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results.
Prerequisites: MAT 161 **or** MAT 171 **or** MAT 175 (must pass with a grade of "C" or higher); **and** RED 080 **or** by placement testing. Corequisites: MAT 263A. (S)

MAT 263A Brief Calculus Lab (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: MAT 161 **or** MAT 171 **or** MAT 175 (must pass with a grade of "C" or higher). Corequisites: MAT 263. (S)

MAT 271   Calculus I (Coll/Tran)   **3 2 0 4**
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.
Prerequisites: MAT 172 **or** MAT 175 (must pass with a grade of "C" or higher); RED 080 **or** by placement testing. Corequisites: None. (F,S,SU)

MAT 272   Calculus II (Coll/Tran)   **3 2 0 4**
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.
Prerequisites: MAT 271 must pass with a grade of "C" or higher; RED 080 **or** by placement testing. Corequisites: None. (F,S)

MAT 273   Calculus III (Coll/Tran)   **3 2 0 4**
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.
Prerequisites: MAT 272 must pass with a grade of "C" or higher; RED 080 **or** by placement testing. Corequisites: None. (S)

MAT 285   Differential Equations (Coll/Tran)   **3 0 0 3**
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.
Prerequisites: MAT 272 must pass with a grade of "C" or higher; RED 080 **or** by placement testing. Corequisites: None. (S)

MECHANICAL

MEC 110   Intro to CAD/CAM   **1 2 0 2**
This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM for the development of a CNC-ready program. Upon completion, students should be able to use CAD/CAM software to produce a CNC program.
Prerequisites: MAC 122, MAC 124. Corequisites: MAC 122, MAC 124.

MEC 111   Machine Processes I   **1 4 0 3**
This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to safely machine simple parts to specified tolerances.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (S)

MEC 142   Physical Metallurgy   **1 2 0 2**
This course covers the heat treating of metals. Emphasis is placed on the effects of hardening, tempering, and annealing on the structure and physical properties of metals. Upon completion, students should be able to heat treat materials.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (F)

MEC 180   Engineering Materials   **2 3 0 3**
This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre and post-manufacturing processes, and material selection of ferrous and non-ferrous metals, plastics, composites, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (F)

MEC 231   Comp-Aided Manufact I   **1 4 0 3**
This course introduces computer-aided design / manufacturing (CAD/CAM) applications and concepts. Topics include software, programming, data transfer and verification, and equipment setup. Upon completion, students should be able to produce parts using CAD/ CAM applications.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (S)

MEC 237   Instr and Control Systems   **3 2 0 4**
This course covers basic principles of instrumentation and control systems. Emphasis is placed upon the application of electrical, electronic, and pneumatic instruments and control systems in mechanical systems. Upon completion, students should be able to understand the application of switches, sensors, transducers, and other control components in circuits for controlling motors, servomechanisms, and other mechanical devices.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (F)

MEC 250   Statics & Strength of Mat   **4 3 0 5**
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 of stresses and strains on structural components.
Prerequisites: MAT 121 **or** MAT 161 **or** MAT 172; RED 080 **or** appropriate placement test score. Corequisites: PHY 131 **or** PHY 151. (F)

MEC 265 Fluid Mechanics   **2 2 0 3**
This course covers the physical behavior of fluids and fluid systems. Topics include fluid statics and dynamics, laminar and turbulent flow, Bernoulli's Equation, components, applications, and other related topics. Upon completion, students should be able to apply fluid power principles to practical applications.
Prerequisites: PHY 131; RED 080 **or** appropriate placement test score.
Corequisites: None. (S)

MEC 270 Machine Design   **3 3 0 4**
This course covers the basic principles underlying design and selection of machine elements. Topics include stress analysis, selection of components, power transmission, and other design considerations. Upon completion, students should be able to identify and solve mechanical design problems by applying basic engineering principles.
Prerequisites: DFT 151, MEC 180, MEC 250; RED 080 **or** appropriate placement test score. Corequisites: None. (S)

MEC 272 Dynamics   **2 2 0 3**
This course covers the forces associated with motion. Topics include translation, rotation, acceleration, displacement, and velocity. Upon completion, students should be able to analyze forces and motion in a dynamic mechanical system.
Prerequisites: PHY 131 **or** PHY 151; RED 080 **or** appropriate placement test score. Corequisites: None. (S)

MEDICAL ASSISTING

MED 114 Prof Interac in Heal Care   **1 0 0 1**
This course is designed to identify various patient behaviors encountered in the medical setting. Emphasis is placed on stressors related to illness, cultural influences, death and dying, and needs specific to patients. Upon completion, students should be able to utilize appropriate methods of verbal and nonverbal communication with empathy and impartiality.
Prerequisites: None. Corequisites: None. (F,S)

MED 118 Medical Law and Ethics   **2 0 0 2**
This course covers legal relationships of physicians and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent, and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical services. Upon completion, students should be able to meet the legal and ethical responsibilities of a multi-skilled health professional.
Prerequisites: None. Corequisites: None. (F, SU)

MED 121 Medical Terminology I   **3 0 0 3**
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.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: None. (F,S)

MED 122 Medical Terminology II   **3 0 0 3**
This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.
Prerequisites: MED 121. Corequisites: None. (F,S)

MARKETING AND RETAILING

MKT 120 Principles of Marketing   **3 0 0 3**
This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making.
Prerequisites: None. Corequisites: None. (S)

MKT 123 Fundamentals of Selling   **3 0 0 3**
This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered.
Prerequisites: None. Corequisites: None. (F)

MKT 220 Advertising and Sales Promotion   **3 0 0 3**
This course covers the elements of advertising and sales promotion in the business environment. Topics include advertising and sales promotion appeals, selection of media, use of advertising and sales promotion as a marketing tool, and means of testing effectiveness. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application.
Prerequisites: None. Corequisites: None. (S)

MKT 221 Consumer Behavior   **3 0 0 3**
This course is designed to describe consumer behavior as applied to the exchange processes involved in acquiring, consuming, and disposing of goods and services. Topics include an analysis of basic and environmental determinants of consumer behavior with emphasis on the decision-making process. Upon completion, students should be able to analyze concepts related to the study of the individual consumer.
Prerequisites: None. Corequisites: None. (On demand)

MKT 223 Customer Service   **3 0 0 3**
This course stresses the importance of customer relations in the business world. Emphasis is placed on learning how to respond to complex customer requirements and to efficiently handle stressful situations. Upon completion, students should be able to demonstrate the ability to handle customer relations.
Prerequisites: None. Corequisites: None. (On demand)

MAINTENANCE

MNT 110 Intro to Maint Procedures   **1 3 0 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.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: None. (On demand)

MUSIC

MUS 110 Music Appreciation (Coll/Tran)   **3 0 0 3**
This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music.
Prerequisites: None. Corequisites: None. (F,S,SU)

MUS 111 Fundamentals of Music (Coll/Tran)   **3 0 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.
Prerequisites: None. Corequisites: None. (F)

MUS 112 Introduction to Jazz (Coll/Tran)   **3 0 0 3**
This course introduces the origins and musical components of jazz and the contributions of its major artists. Emphasis is placed on the development of discriminating listening habits, as well as the investigation of the styles and structural forms of the jazz idiom. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music.
Prerequisites: None. Corequisites: None. (On demand)

MUS 113 American Music (Coll/Tran)   **3 0 0 3**
This course introduces various musical styles, influences, and composers of the United States from pre-Colonial times to the present. Emphasis is placed on the broad variety of music particular to American culture. Upon completion, students should be able to demonstrate skills in basic listening and understanding of American music.
Prerequisites: None. Corequisites: None

MUS 121   Music Theory I (Coll/Tran)   **3 2 0 4**
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.
Prerequisites: None. Corequisites: None. (F)

MUS 122   Music Theory II (Coll/Tran)   **3 2 0 4**
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.
Prerequisites: MUS 121. Corequisites: None. (S)

MUS 131   Chorus I (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. This course includes a performance choir that will prepare a Christmas Music Presentation in conjunction with a neighborhood church choir; rehearsals at both locations (on campus and church site) will be required.
Prerequisites: Appropriate vocal proficiency. Corequisites: None. (On demand)

MUS 132   Chorus II (Coll/Tran)   **0 2 0 1**
This course provides a continuation of studies begun in MUS 131. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.
Prerequisites: MUS 131. Corequisites: None. (On demand)

MUS 133   Band I (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: Audition. Corequisites: None. (F, On demand)

MUS 134   Band II (Coll/Tran)   **0 2 0 1**
This course is a continuation of MUS 133. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 133. Corequisites: None. (S, On demand)

MUS 135   Jazz Ensemble I   **0 2 0 1**
This course provides an opportunity for those who play an appropriate instrument to gain experience playing in a jazz ensemble. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: None. Corequisites: None. (On demand)

MUS 136   Jazz Ensemble II (Coll/Tran)   **0 2 0 1**
This course is a continuation of MUS 135. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 135. Corequisites: None. (On demand)

MUS 141   Ensemble I (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: Audition. Corequisites: None. (F)

MUS 142   Ensemble II (Coll/Tran)   **0 2 0 1**
This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of

ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 141. Corequisites: None. (S)

MUS 151   Class Music I (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: None. Corequisites: None. (F)

MUS 151G   Class Music I-Guitar   **0 2 0 1**
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.
Prerequisites: None. Corequisites: None. (F)

MUS 151P   Class Music I-Piano   **0 2 0 1**
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.
Prerequisites: None. Corequisites: None. (F)

MUS 151V   Class Music I-Voice   **0 2 0 1**
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.
Prerequisites: None. Corequisites: None. (F, On demand)

MUS 152   Class Music II (Coll/Tran)   **0 2 0 1**
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 151. Corequisites: None. (S)

MUS 152G   Class Music I-Guitar   **0 2 0 1**
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 151. Corequisites: None. (S)

MUS 152P   Class Music II-Piano   **0 2 0 1**
This course is a continuation of MUS 151P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 151. Corequisites: None. (S)

MUS 152V   Class Music I-Voice   **0 2 0 1**
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.
Prerequisites: None. Corequisites: None. (F, On demand)

MUS 161   Applied Music I (Coll/Tran)   **1 2 0 2**
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: None. Corequisites: None. (F,S,SU)

MUS 161B   Applied Music I-Brass   **1 2 0 2**
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: Audition. Corequisites: None. (F,S)

MUS 161D   Applied Music I-Percussion   **1 2 0 2**
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: None. Corequisites: None. (F,S)

MUS 161G   Applied Music I-Guitar   **1 2 0 2**
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: None. Corequisites: None. (F,S)

MUS 161P   Applied Music I-Piano   **1 2 0 2**
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: Audition. Corequisites: None. (F,S,SU)

MUS 161V   Applied Music I-Voice   **1 2 0 2**
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: Audition. Corequisites: None. (F,S,SU)

MUS 161W   Applied Music I-Woodwinds   **1 2 0 2**
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: Audition. Corequisites: None. (F,S)

MUS 162   Applied Music II (Coll/Tran)   **1 2 0 2**
This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire thorugh performance.
Prerequisites: MUS 161. Corequisites: None. (F,S)

MUS 162B   Applied Music II-Brass   **1 2 0 2**
This course is a continuation of MUS 161B. 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 thorugh performance.
Prerequisites: MUS 161. Corequisites: None. (F,S)

MUS 162G   Applied Music II-Guitar   **1 2 0 2**
This course is a continuation of MUS 161G. 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 thorugh performance.
Prerequisites: MUS 161. Corequisites: None. (F,S)

MUS 162P   Applied Music II-Piano   **1 2 0 2**
This course is a continuation of MUS 161P. 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 thorugh performance.
Prerequisites: MUS 161. Corequisites: None. (F,S)

MUS 162V   Applied Music II-Voice   **1 2 0 2**
This course is a continuation of MUS 161V. 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 thorugh performance.
Prerequisites: MUS 161. Corequisites: None. (F,S)

MUS 162W   Applied Music II-Woodwinds   **1 2 0 2**
This course is a continuation of MUS 161W. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 161. Corequisites: None. (F,S)

MUS 175   Recording Techniques I (Coll/Tran)   **2 0 0 2**
This course introduces the recording studio from an artistic and operational point of view. Emphasis is placed on audio consoles, microphones, multi-track recorders, and echo chambers. Upon completion, students should be able to demonstrate understanding of operation and function of recording equipment and its relationship to musician, sound engineer, and producer.
Prerequisites: None. Corequisites: None.

MUS 176   Recording Techniques II (Coll/Tran)   **0 4 0 2**
This course continues the study and application of recording techniques begun in MUS 175. Emphasis is placed on multi-track recording and mix-down, microphone placement, and patch bay function. Upon completion, students should be able to create projects demonstrating proficiency in the skills and use of the equipment studied.
Prerequisites: MUS 175. Corequisites: None.

MUS 181   Show Choir I (Coll/Tran)   **3 3 0 4**
This course provides students the initial training in basic competencies of dance/voice-based performances and to the nuances of preparation for such pop/jazz/theatre performances. Emphasis is placed on the introduction to, and subsequent development of, basic performance skills necessary for choreographed performance. Upon completion, students should be able to demonstrate the foundation competencies necessary to perform the assigned literature in various venues and under various professional conditions.
Prerequisites: None. Corequisites: None. (F,S)

MUS 182   Show Choir II (Coll/Tran)   **3 3 0 4**
This course provides intermediate training in dance/voice-based performances and in the nuances of preparation for such pop/jazz/theatre performances. Emphasis is placed on continued development of skills necessary for professional group choral preparation and performance, as well as effective social interaction with a performance troupe. Upon completion, students should be able to demonstrate the intermediate competencies necessary to perform the assigned literature in various venues and under various professional conditions.
Prerequisites: MUS 181. Corequisites: None. (F,S)

MUS 210   History of Rock Music (Coll/Tran)   **3 0 0 3**
This course is a survey of Rock music from the early 1950's to the present. Emphasis is placed on musical groups, soloists, and styles related to the evolution of this idiom and on related historical and social events. Upon completion, students should be able to identify specific styles and to explain the influence of selected performers within their respective eras. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.
Prerequisites: None. Corequisites: None.

MUS 211   History of Country Music (Coll/Tran)   **3 0 0 3**
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.
Prerequisites: None. Corequisites: None.

MUS 212 American Musical Theatre (Coll/Tran) **3 0 0 3**
This course covers the origins and development of the musical from Show Boat to the present. Emphasis is placed on the investigation of the structure of the musical and its components through listening and analysis. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music.
Prerequisites: None. Corequisites: None. (On demand)

MUS 213 Opera and Musical Theatre (Coll/Tran) **3 0 0 3**
This course covers the origins and development of opera and musical theatre from the works of Claudio Monteverdi to the present. Emphasis is placed on how the structure and components of opera and musicals effect dramaturgy through listening examples and analysis. Upon completion, students should be able to demonstrate analytical and listening skills in understanding both opera and the musical.
Prerequisites: None. Corequisites: None. (S)

MUS 214 Electronic Music I (Coll/Tran) **1 2 0 2**
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 general education core requirement in humanities/fine arts.
Prerequisites: MUS 111. Corequisites:None.

MUS 215 Electronic Music II (Coll/Tran) **1 2 0 2**
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 general education core requirement in humanities/fine arts.
Prerequisites: MUS 214. Corequisites: None.

MUS 217 Elementary Conducting (Coll/Tran) **1 2 0 2**
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.
Prerequisites: MUS 111. Corequisites: None. (S)

MUS 221 Music Theory III (Coll/Tran) **3 2 0 4**
This course is a continuation of MUS 122. Emphasis is placed on altered and chromatic harmony, common practice era compositional techniques and forms, 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.
Prerequisites: MUS 122. Corequisites: None. (S)

MUS 222 Music Theory IV (Coll/Tran) **3 2 0 4**
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.
Prerequisites: MUS 221. Corequisites: None. (S)

MUS 231 Chorus III (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 132. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.
Prerequisites: MUS 132. Corequisites: None. (S, On demand)

MUS 232 Chorus IV (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 231. Emphasis is placed on vocal techniques and the study of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.
Prerequisites: MUS 231. Corequisites: None. (On demand)

MUS 233 Band III (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 134. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 134. Corequisites: None. (On demand)

MUS 234 Band IV (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 233. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 233. Corequisites: None. (On demand)

MUS 235 Jazz Ensemble III (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 136. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 136. Corequisites: None. (On demand)

MUS 236 Jazz Ensemble IV (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 235. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 235. Corequisites: None. (On demand)

MUS 241 Ensemble III (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 142. Corequisites: None. (F,S)

MUS 242 Ensemble IV (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: MUS 241. Corequisites: None. (On demand)

MUS 251 Class Music III (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 152. Corequisites: None.

MUS 252 Class Music IV (Coll/Tran) **0 2 0 1**
This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 251. Corequisites: None.

MUS 261 Applied Music III (Coll/Tran) **1 2 0 2**
This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 162. Corequisites: None. (S)

MUS 261B Applied Music III-Brass **1 2 0 2**
This course is a continuation of MUS 162B. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 162. Corequisites: None. (S)

MUS 261D   Applied Music III-Percussion   1 2 0 2
This course is a continuation of MUS 162D. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 162. Corequisites: None. (S)

MUS 261G   Applied Music III-Guitar   1 2 0 2
This course is a continuation of MUS 162G. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 162. Corequisites: None. (S)

MUS 261P   Applied Music III-Piano   1 2 0 2
This course is a continuation of MUS 162P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 162. Corequisites: None. (S)

MUS 261V   Applied Music III-Voice   1 2 0 2
This course is a continuation of MUS 162V. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 162. Corequisites: None. (S)

MUS 261W   Applied Music III-Woodwinds   1 2 0 2
This course is a continuation of MUS 162W. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 162. Corequisites: None. (S)

MUS 262   Applied Music IV (Coll/Tran)   **1 2 0 2**
This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 261. Corequisites: None. (S)

MUS 262B   Applied Music IV-Brass   1 2 0 2
This course is a continuation of MUS 261B. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 261. Corequisites: None. (S)

MUS 262G   Applied Music IV-Guitar   1 2 0 2
This course is a continuation of MUS 261G. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 261. Corequisites: None. (S)

MUS 262P   Applied Music IV-Piano   1 2 0 2
This course is a continuation of MUS 261P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 261. Corequisites: None. (S)

MUS 262V   Applied Music IV-Voice   1 2 0 2
This course is a continuation of MUS 261V. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 261. Corequisites: None. (S)

MUS 262W   Applied Music IV-Woodwinds   1 2 0 2
This course is a continuation of MUS 261W. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion,

students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: MUS 261. Corequisites: None. (S)

MUS 270   Music Literature (Coll/Tran)   **3 0 0 3**
This course is a survey of music literature from the Middle Ages to the present. Emphasis is placed on selected works of representative composers. Upon completion, students should be able to trace important developments and demonstrate an understanding of the aspects of the composers' styles.
Prerequisites: MUS 122. Corequisites: None. (S)

MUS 281   Show Choir III (Coll/Tran)   **3 3 0 4**
This course provides advanced training in dance/voice-based performance and in the nuances of preparation for such pop/jazz/theatre performances. Emphasis is placed on development of advanced skills necessary for professional group choral performance and the technical skills necessary for the execution of such performances. Upon completion, students should be able to demonstrate the advanced competencies necessary to perform the assigned literature in various venues and under various professional conditions.
Prerequisites: MUS 182. Corequisites: None. (F,S)

MUS 282   Show Choir IV (Coll/Tran)   **3 3 0 4**
This course provides advanced training in dance/voice-based pop/jazz/theatre performances and is the capstone course in a four-semester series. Emphasis is placed on refinement of advanced skills necessary for professional group choral performance and the technical skills necessary for the execution of such performances. Upon completion, students should be able to demonstrate a mastery of the skills necessary to plan and perform the assigned literature in various venues and under various professional conditions.
Prerequisites: MUS 281. Corequisites: None. (F,S)

MUS 283   Varied Cultures/Mus Perf (Coll/Tran)   **1 2 0 2**
This course provides an opportunity for music students to experience various musical cultures and to perform in public venues for audiences in these cultures. Emphasis is placed on the development of performance skills and on the musically historical information that characterizes the specific culture. Upon completion, students should be able to identify new culturally-based musical concepts and will have experiences in working with other cultures and in culturally-reflective environments.
Prerequisites: None. Corequisites: MUS 181 **or** MUS 182 **or** MUS 281 **or** MUS 282. (S - Invitation only)

NETWORKING TECHNOLOGY

NET 125   Networking Basics   1 4 0 3
This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, Students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.
Prerequisites: None. Corequisites: None. (F,S)

NET 126   Routing Basics   1 4 0 3
This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.
Prerequisites: NET 125. Corequisites: None. (F,S)

NET 175   Wireless Technology   2 2 0 3
This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Mark-up language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications.
Prerequisites: NET 125. Corequisites: None. (F)

NET 225 Routing & Switching I 1 4 0 3

This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.
Prerequisites: NET 126. Corequisites: None. (F,S)

NET 226 Routing & Switching II 1 4 0 3

This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, and describe the Spanning Tree protocol.
Prerequisites: NET 225. Corequisites: None. (F,S)

NET 240 Network Design 3 0 0 3

This course covers the principles of the design of LANs and WANs. Topics include network architecture, transmission systems, traffic management, bandwidth requirements, Internet working devices, redundancy, and broad-band versus base-band systems. Upon completion, students should be able to design a network to meet specified business and technical requirements.
Prerequisites: NET 125. Corequisites: None. (S)

NET 270 Building Scalable Netwks 1 4 0 3

This course covers principles and techniques of scalable networks. Topics include building multi-layer networks, controlling overhead traffic in growing routed networks, and router capabilities used to control traffic over LANs and WANs. Upon completion, students should be able to design; implement; and improve traffic flow, reliability, redundancy, and performance in enterprise networks.
Prerequisites: NET 226. Corequisites: None. (On demand)

NET 271 Remote Access Networks 1 4 0 3

This course covers how to build a remote access network to interconnect central sites to branch offices, home offices, and telecommuters. Topics include enabling on-demand/permanent connections to the central site, scaling and troubleshooting remote access networks, and maximizing bandwidth utilization over remote links. Upon completion, students should be able to assemble and configure equipment, establish WAN connections, enable protocols/technologies, allow traffic between sites, and implement accessible access control.
Prerequisites: NET 226. Corequisites: None. (On demand)

NET 272 Multi-Layer Networks 1 4 0 3

This course covers building campus networks using multi-layer switching technologies over a high-speed Ethernet. Topics include improving IP routing performance with multi-layer switching, implementing fault tolerance routing, and managing high bandwidth broadcast while controlling IP multi-cast access to networks. Upon completion, students should be able to install and configure multi-layer enterprise networks and determine the required router configurations to support new services and applications.
Prerequisites: NET 226. Corequisites: None. (On demand)

NET 273 Internetworking Support 1 4 0 3

This course covers how to baseline and troubleshoot and internetworking environment using routers and switches for multi-protocol client, host and servers. Topics include troubleshooting processes, routing and routed protocols, campus switching; and WAN troubleshooting. Upon completion, students should be able to troubleshoot Ethernet, Fast Ethernet, and Token Ring LANs; and Serial, Frame Relay, and ISDN connections.
Prerequisites: NET 226. Corequisites: None. (On demand)

NETWORKING OPERATING SYSTEMS

NOS 110 Operating System Concepts 2 3 0 3

This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is placed on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.
Prerequisites: None. Corequisites: None. (F,S)

NOS 120 Linux/UNIX Single User 2 2 0 3

This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles.
Prerequisites: NOS 110. Corequisites: None. (S)

NOS 130 Windows Single User 2 2 0 3

This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment.
Prerequisites: NOS 110. Corequisites: None. (S)

NOS 220 Linux/UNIX Admin I 2 2 0 3

This course introduces the Linux file system, group administration, and system hardware controls. Topics include installation, creation and maintaining file systems, NIS client and DHCP client configuration, NFS, SMB/Samba, Configure X, Gnome, KDE, basic memory, processes, and security. Upon completion, students should be able to perform system administration tasks including installation, configuring and attaching a new Linux workstation to an existing network.
Prerequisites: NOS 120. Corequisites: None. (On demand)

NOS 221 Linux/UNIX Admin II 2 2 0 3

This course includes skill-building in configuring common network services and security administration using Linux. Topics include server-side setup, configuration, basic administration of common networking services, and security administration using Linux. Upon completion, students should be able to setup a Linux server and configure common network services including security requirements.
Prerequisites: NOS 220. Corequisites: None. (On demand)

NOS 222 Linux/UNIX Admin III 2 2 0 3

This course includes technical topics in preparing an enterprise Linux system for common uses. Topics include advanced study of hardware, installation, boot process, file system administration, software administration, user administration, system administration, kernel services, configuration, securing services, and troubleshooting. Upon completion, students should be able to administer an enterprise Linux system.
Prerequisites: NOS 221. Corequisites: None. (On demand)

NOS 230 Windows Admin I 2 2 0 3

This course covers the installation and administration of a Windows Server network operating system. Topics include managing and maintaining physical and logical devices, access to resources, the server environment, managing users, computers, and groups, and Managing/Implementing Disaster Recovery. Upon completion, students should be able to manage and maintain a Windows Server environment.
Prerequisites: NOS 130. Corequisites: None. (F)

NOS 231 Windows Admin II 2 2 0 3

This course covers implementing, managing, and maintaining a Windows Server network infrastructure. Topics include implementing, managing, and maintaining IP addressing, name resolution, network security, routing and remote access, and managing a network infrastructure. Upon completion, students should be able to manage and maintain a Windows Server environment
Prerequisites: NOS 230. Corequisites: None. (S)

NOS 232 Windows Admin III 2 2 0 3

This course covers implementing and administering security in a Windows Server network. Topics include implementing, managing, and trouble shooting security policies, patch management infrastructure, security for network communications, authentication, authorization, and PKI. Upon completion, students should be able to implement, manage, and maintain a Windows Server network infrastructure.
Prerequisites: NOS 231. Corequisites: None. (On demand)

NOS   240   Novell Admin I   2 2 0 3
This course will introduce students to the Novell network operating system. Topics include installing and using NetWare, managing printing, storage space, implement inginternet services, and managing security. Upon completion, students should have basic knowledge about implementing NetWare and using its management tools.
Prerequisites: NOS 110. Corequisites: None. (On demand)

NOS   244   Operating System – AS/400   2 2 0 3
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.
Prerequisites: None. Corequisites: None. (S)

NURSING

NUR   111   Intro to Health Concepts   4 6 6 8
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: None. Corequisites: BIO 168. (On demand)

NUR   111AB Intro to Health Concepts   2 3 3 4
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: None. Corequisites: BIO 168. (On demand)

NUR   111BB Intro to Health Concepts   2 3 3 4
This course is a continuation of NUR 111AB. This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: None. Corequisites: BIO 168. (On demand)

NUR   112   Health-Illness Concepts   3 0 6 5
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid-base, metabolism, cellular regulation, oxygenation, infection, stress/coping, health-wellness-illness, communication, caring interventions, managing care, safety, quality improvement, and informatics. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: BIO 168, NUR 111, PSY 150.
Corequisites: BIO 169, PSY 241. (On demand)

NUR   113   Family Health Concepts   3 0 6 5
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of oxygenation, sexuality, reproduction, grief/loss, mood/affect, behaviors, development, family, health-wellness-illness, communication, caring interventions, managing care, safety, and advocacy. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: BIO 168, BIO 169, ENG 111, NUR 111, NUR 112, NUR 114, PSY 150, PSY 241. Corequisites: BIO 275. (On demand)

NUR   114   Holistic Health Concepts   3 0 6 5
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, inflammation, sensory perception, stress/coping, mood/affect, cognition, self, violence, health-wellness-illness, professional behaviors, caring interventions, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: BIO 168, NUR 111, PSY 150.
Corequisites: BIO 169, PSY 241. (On demand)

NUR   211   Health Care Concepts   3 0 6 5
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: BIO 168, BIO 169, NUR 111, NUR 112, NUR 114, PSY 150, PSY 241. Corequisites: ENG 111. (On demand)

NUR   212   Health System Concepts   3 0 6 5
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: BIO 168, BIO 169, NUR 111, NUR 112, NUR 114, PSY 150, PSY 241. Corequisites: ENG 111. (On demand)

NUR   213   Complex Health Concepts   4 3 15 10
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.
Prerequisites:Take NUR 111. Corequisites: ENG 112 **or** ENG 113, **or** ENG 114; NUR 112, NUR 113, NUR 114, NUR 211, NUR 112.

NUR   213AB Complex Health Concepts   2 2 7 5
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.
Prerequisites: BIO 168, BIO 169, BIO 275, ENG 111, NUR 111, NUR 112, NUR 113, NUR 114, NUR 211, NUR 212, PSY 150, PSY 241.
Corequisites: ENG 112 **or** ENG 113, **or** ENG 114. (On demand)

NUR   213BB Complex Health Concepts   2 1 8 5
This course is a continuation of NUR 213AB. This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.
Prerequisites: BIO 168, BIO 169, BIO 275, ENG 111, NUR 111, NUR 112, NUR 113, NUR 114, NUR 211, NUR 212, PSY 150, PSY 241.
Corequisites: ENG 112 **or** ENG 113, **or** ENG 114. (On demand)

OFFICE SYSTEMS TECHNOLOGY

OST   080   Keyboarding Literacy   1 2 0 2
This course is designed to develop elementary keyboarding skills. Emphasis is placed on mastery of the keyboard. Upon completion, students should be able to demonstrate basic proficiency in keyboarding.
Prerequisites: None. Corequisites: None.

OST   131   Keyboarding   1 2 0 2
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.
Prerequisites: None. Corequisites: CTS 080 **or** CIS 110. (On demand)

OST   132   Keyboard Skill Building   1 2 0 2
This course is designed to increase speed and improve accuracy in keyboarding. Emphasis is placed on diagnostic tests to identify accuracy and speed deficiencies followed by corrective drills. Upon completion, students should be able to keyboard rhythmically with greater accuracy and speed.
Prerequisites: OST 080. Corequisites: None. (F)

OST   136   Word Processing   2 2 0 3
This course is designed to introduce word processing concepts and applications. Topics include preparation of a variety of documents and mastery of specialized software functions. Upon completion, students should be able to work effectively in a computerized word processing environment.
Prerequisites: None. Corequisites: CTS 080. (F)

OST   137   Office Software Applicat   2 2 0 3
This course introduces the concepts and functions of software that meets the changing needs of the community. Emphasis is placed on the terminology and use of software through a hands on approach. Upon completion, students should be able to use software in a business environment.
Prerequisites: None. Corequisites: CTS 080. (S)

OST   148   Med Coding Billing & Insu   3 0 0 3
This course introduces fundamentals of medical coding, billing, and insurance. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim.
Prerequisites: None. Corequisites: None. (S)

OST   149   Medical Legal Issues   3 0 0 3
This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior.
Prerequisites: None. Corequisites: None. (S,SU)

OST   153   Office Finance Solutions   1 2 0 2
This course introduces basic bookkeeping concepts. Topics include entering data in accounts payable and receivable, keeping petty cash records, maintaining inventory, reconciling bank statements, running payroll, and generating simple financial reports. Upon completion, students should be able to demonstrate competence in the entry and manipulation of data to provide financial solutions for the office.
Prerequisites: None. Corequisites: CTS 080. (S)

OST   164   Text Editing Applications   3 0 0 3
This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.
Prerequisites: None. Corequisites: CTS 080. (F)

OST   165   Adv Text Editing Apps   2 2 0 3
This course is designed to develop proficiency in advanced editing skills needed in the office environment. Emphasis is placed on the application of creating effective electronic office documents. Upon completion, students should be able to apply advanced editing skills to compose text.
Prerequisites: OST 164. Corequisites: None. (F)

OST   181   Intro to Office Systems   2 2 0 3
This course introduces the skills and abilities needed in today's office. Topics include effectively interacting with co-workers and the public, processing simple financial and informational documents, and performing functions typical of today's offices. Upon completion, students should be able to display skills and decision-making abilities essential for functioning in the total office context.
Prerequisites: None. Corequisites: None. (S)

OST   184   Records Management   2 2 0 3
This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.
Prerequisites: None. Corequisites: CTS 080. (S)

OST   243   Med Office Simulation   2 2 0 3
This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, storing and retrieving information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections.
Prerequisites: OST 148. Corequisites: None. (S)

OST   247   Procedure Coding   1 2 0 2
This course provides in-depth coverage of procedural coding. Emphasis is placed on CPT and HCPCS coding systems. Upon completion, students should be able to properly code procedures and services performed in a medical facility.
Prerequisites: MED 121 **or** OST 141. Corequisites: None. (F,S)

OST   248   Diagnostic Coding   1 2 0 2
This course provides an in-depth study of diagnostic coding. Emphasis is placed on ICD coding system. Upon completion, students should be able to properly code diagnoses in a medical facility.
Prerequisites: MED 121 **or** OST 141. Corequisites: None. (S)

OST   281   Emer Issues in Med Ofc   3 0 0 3
This course provides a comprehensive discussion of topics familiar to the health care setting. Topics include emerging issues in the health care setting. Upon completion, students should be able to demonstrate an understanding of current medical office procedures and treatments.
Prerequisites: None. Corequisites: None. (S)

OST   284   Emerging Technologies   1 2 0 2
This course provides opportunities to explore emerging technologies. Emphasis is placed on identifying, researching, and presenting current technological topics for class consideration and discussion. Upon completion, students should be able to understand the importance of keeping abreast of technological changes that affect the office professional.
Prerequisites: None. Corequisites: CTS 080. (S)

OST   286   Professional Development   3 0 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.
Prerequisites: None. Corequisites: None. (F)

OST   289   Administrative Office Mgt   2 2 0 3
This course is designed to be a capstone course for the office professional and provides a working knowledge of modern office procedures. Emphasis is placed on scheduling, telephone procedures, travel arrangements, event planning, office design, and ergonomics. Upon completion, students should be able to adapt in an office environment.
Prerequisites: OST 134 **and** OST 164, **or** OST 136 **and** OST 164.
Corequisites: None. (S)

PUBLIC ADMINISTRATION

PAD   254   Grant Writing   **3 0 0 3**
This course covers the basic techniques of successful grant writing. Topics include concept development, funding sources research, and writing skills relevant to the grants process. Upon completion, students should be able to demonstrate a basic understanding of the grants process.
Prerequisites: None. Corequisites: None

PHYSICAL EDUCATION

PED   110   Fit and Well for Life (Coll/Tran)   **1 2 0 2**
This course is designed to investigate and apply the basic concepts and principles of lifetime physical fitness and other health related factors. Emphasis is placed on wellness through the study of nutrition, weight control, stress management, and consumer facts on exercise and fitness. Upon completion, students should be able to plan a personal, lifelong fitness program based on individual needs, abilities, and interests.
Prerequisites: None. Corequisites: None. (S, On demand)

PED   113   Aerobics I (Coll/Tran)   **0 3 0 1**
This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program.
Prerequisites: None. Corequisites: None. (F,S, On demand)

PED   114   Aerobics II (Coll/Tran)   **0 3 0 1**
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.
Prerequisites: PED 113 **or** equivalent training or experience. Corequisites: None. (On demand)

PED   117   Weight Training I (Coll/Tran)   **0 3 0 1**
This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program.
Prerequisites: None. Corequisites: None. (F,S, On demand)

PED   118   Weight Training II (Coll/Tran)   **0 3 0 1**
This course covers advanced levels of weight training. Emphasis is placed on meeting individual training goals and addressing weight training needs and interests. Upon completion, students should be able to establish and implement an individualized advanced weight training program.
Prerequisites: PED 117 **or** equivalent training or experience. Corequisites: None. (F,S, On demand)

PED   120   Walking for Fitness (Coll/Tran)   **0 3 0 1**
This course introduces fitness through walking. Emphasis is placed on stretching, conditioning exercises, proper clothing, fluid needs, and injury prevention. Upon completion, students should be able to participate in a recreational walking program.
Prerequisites: None. Corequisites: None. (On demand)

PED   121   Walk, Jog, Run (Coll/Tran)   **0 3 0 1**
This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, or running as a means of achieving fitness. Upon completion, students should be able to understand and appreciate the benefits derived from these activities.
Prerequisites: None. Corequisites: None. (On demand)

PED   122   Yoga I (Coll/Tran)   **0 2 0 1**
This course introduces the basic discipline of yoga. Topics include proper breathing, relaxation techniques, and correct body positions. Upon completion, students should be able to demonstrate the procedures of yoga.
Prerequisites: None. Corequisites: None. (F,S, On demand)

PED   123   Yoga II (Coll/Tran)   **0 2 0 1**
This course introduces more detailed aspects of the discipline of yoga. Topics include breathing and physical postures, relaxation, and mental concen-

tration. Upon completion, students should be able to demonstrate advanced procedures of yoga.
Prerequisites: PED 122. Corequisites: None.

PED   124   Run, Swim, Cycle (Coll/Tran)   **0 3 0 1**
This course introduces the sport of the triathlon. Topics include the rules, equipment, and skills necessary for the triathlon. Upon completion, students should be able to participate in a triathlon competition.
Prerequisites: None. Corequisites: None. (On demand)

PED   125   Self-Defense-Beginning (Coll/Tran)   **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED   128   Golf-Beginning (Coll/Tran)   **0 2 0 1**
This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf.
Prerequisites: None. Corequisites: None. (On demand)

PED   129   Golf-Intermediate (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: PED 128 **or** equivalent training or experience. Corequisites: None. (On demand)

PED   130   Tennis-Beginning (Coll/Tran)   **0 2 0 1**
This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis.
Prerequisites: None. Corequisites: None. (F,SU, On demand)

PED   131   Tennis-Intermediate (Coll/Tran)   **0 2 0 1**
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.
Prerequisites: PED 130 **or** equivalent training or experience.
Corequisites: None. (On demand)

PED   137   Badminton (Coll/Tran)   **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED   138   Archery (Coll/Tran)   **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED   139   Bowling-Beginning (Coll/Tran)   **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED   142   Lifetime Sports (Coll/Tran)   **0 2 0 1**
This course is designed to give an overview of a variety of sports activities. Emphasis is placed on the skills and rules necessary to participate in a variety of lifetime sports. Upon completion, students should be able to demonstrate an awareness of the importance of participating in lifetime sports activities.
Prerequisites: None. Corequisites: None. (On demand)

PED 143 Volleyball-Beginning (Coll/Tran) **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED 144 Volleyball-Intermediate (Coll/Tran) **0 2 0 1**
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.
Prerequisites: PED 143. Corequisites: None. (On demand)

PED 145 Basketball-Beginning (Coll/Tran) **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED 146 Basketball-Intermediate (Coll/Tran) **0 2 0 1**
This course covers more advanced basketball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play basketball at a competitive level.
Prerequisites: PED 145. Corequisites: None. (On demand)

PED 147 Soccer (Coll/Tran) **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED 148 Softball (Coll/Tran) **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED 150 Baseball - Beginning (Coll/Tran) **0 3 0 1**
This course covers the fundamentals of baseball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational baseball.
Prerequisites: None. Corequisites: None.

PED 152 Swimming-Beginning (Coll/Tran) **0 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED 153 Swimming-Intermediate (Coll/Tran) **0 2 0 1**
This course is designed for those who have mastered basic swimming skills. Emphasis is placed on refining basic skills and learning new swim strokes. Upon completion, students should be able to demonstrate the four basic strokes, the scissors kick, the underwater swim, and other related skills.
Prerequisites: PED 152 **or** proficiency in swimming. Corequisites: None. (On demand)

PED 154 Swimming for Fitness (Coll/Tran) **0 3 0 1**
This course introduces lap swimming, aquacises, water activities, and games. Emphasis is placed on increasing cardiovascular efficiency through aquatic exercise. Upon completion, students should be able to develop an individualized aquatic fitness program.
Prerequisites: PED 152. Corequisites: None. (On demand)

PED 156 Scuba Diving (Coll/Tran) **0 2 0 1**
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.
Prerequisites: PED 153 **or** proficiency in swimming. Corequisites: None. (On demand)

PED 158 Whitewater Rafting (Coll/Tran) **0 2 0 1**
This course covers the skills necessary to safely participate in whitewater rafting. Topics include raft guiding, paddling skills, scouting rapids, and rigging boats. Upon completion, students should be able to successfully complete a whitewater rafting experience.
Prerequisites: PED 152. Corequisites: None.

PED 160 Canoeing-Basic (Coll/Tran) **0 2 0 1**
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.
Prerequisites: None. Corequisites: None.

PED 161 Canoeing-Rivers (Coll/Tran) **0 2 0 1**
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.
Prerequisites: PED 160. Corequisites: None.

PED 163 Kayaking-Basic (Coll/Tran) **0 2 0 1**
This course is designed to teach the basic skills of kayaking. Topics include forward and reverse strokes, sweeps, Eskimo roll, and self-rescue skills. Upon completion, students should be able to maneuver and demonstrate safe kayaking practices.
Prerequisites: PED 152. Corequisites: None.

PED 171 Nature Hiking (Coll/Tran) **0 2 0 1**
This course provides instruction on how to equip and care for oneself on the trail. Topics include clothing, hygiene, trail ethics, and necessary equipment. Upon completion, students should be able to successfully participate in nature trail hikes. Much of this course involves travel to and participation on nearby mountain trails.
Prerequisites: None. Corequisites: None. (On demand)

PED 180 Cycling (Coll/Tran) **0 2 0 1**
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. Much of this course involves travel to and participation on roads away from campus.
Prerequisites: None. Corequisites: None. (On demand)

PED 181 Snow Skiing-Beginning (Coll/Tran) **0 2 0 1**
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.
Prerequisites: None. Corequisites: None. (S)

PED 212 Snowboarding-Beginning (Coll/Tran) **0 2 0 1**
This course is designed to develop the basic knowledge and skills of snowboard. Topics include equipment, conditioning exercises, terminology, safety, rules, fundamental skills, and the use of lifts. Upon completion, students should be able to snowboard downhill, enter and exit a ski lift, and perform basic maneuvers on a snowboard.
Prerequisites: None. Corequisites: None. (S)

PED 217 Pilates I (Coll/Tran) **0 2 0 1**
This course provides an introduction to the pilates method of body conditioning exercise. Topics include instruction in beginning and intermediate pilates exercises using a mat or equipment, history of pilates method, and relevant anatomy and physiology. Upon completion, students should be able to perform beginning and intermediate exercises, and possess an understanding of the benefits of conditioning the body's core muscles.
Prerequisites: None. Corequisites: None.

PED 218 Pilates II (Coll/Tran) **0 2 0 1**
This course provides continued instruction to the pilates method of body conditioning exercise. Topics include instruction in intermediate and advanced pilates exercises using a mat or equipment, relevant anatomy and physiology, and further discussion of related concepts. Upon completion, students should be able to perform intermediate and advanced exercises, and possess the autonomy to maintain their own personal pilates practice.
Prerequisites: PED 217. Corequisites: None.

PED 220 Exer for Phys Challenged (Coll/Tran) **0 2 0 1**
This course is designed to improve physical strength, endurance, and range of motion while focusing on individual needs. Emphasis is placed on exercises which are designed and adapted to serve those with special needs. Upon completion, students should be able to show improved physical fitness, body awareness, and an appreciation for their physical well-being.
Prerequisites: None. Corequisites: None. (On demand)

PED 250 Officiating/Bkball/Vball (Coll/Tran) **1 2 0 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.
Prerequisites: None. Corequisites: None. (On demand)

PED 251 Officiating/Ftball/Soccer (Coll/Tran) **1 2 0 2**
This course introduces the rules and techniques for sports officiating in football and soccer. Emphasis is placed on officiating fundamentals and responsibilities. Upon completion, students should be able to demonstrate proper mechanics and knowledge of officiating procedures in football and soccer.
Prerequisites: None. Corequisites: None. (On demand)

PED 252 Officiating/Bsball/Sfball (Coll/Tran) **1 2 0 2**
This course introduces the rules and techniques for sports officiating in baseball and softball. Emphasis is placed on officiating fundamentals and responsibilities. Upon completion, students should be able to demonstrate proper mechanics and knowledge of officiating procedures in baseball and softball.
Prerequisites: None. Corequisites: None. (On demand)

PED 254 Coaching Basketball (Coll/Tran) **1 2 0 2**
This course introduces the theory and methods of coaching basketball. Emphasis is placed on rules, game strategies, and selected techniques of coaching basketball. Upon completion, students should be able to demonstrate competent coaching skills in basketball.
Prerequisites: None. Corequisites: None. (On demand)

PED 256 Coaching Baseball (Coll/Tran) **1 2 0 2**
This course introduces the theory and methods of coaching baseball. Emphasis is placed on rules, game strategies, and selected techniques of coaching baseball. Upon completion, students should be able to demonstrate competent coaching skills in baseball.
Prerequisites: None. Corequisites: None. (On demand)

PED 259 Prev & Care Ath Injuries (Coll/Tran) **1 2 0 2**
This course provides information on the prevention and care of athletic injuries. Topics include safety devices, taping, therapeutic techniques, and conditioning exercises. Upon completion, students should be able to demonstrate proper preventive measures and skills in caring for athletic injuries.
Prerequisites: None. Corequisites: None. (On demand)

PHILOSOPHY

PHI 210 History of Philosophy (Coll/Tran) **3 0 0 3**
This course introduces fundamental philosophical issues through an historical perspective. Emphasis is placed on such figures as Plato, Aristotle, Lao-Tzu, Confucius, Augustine, Aquinas, Descartes, Locke, Kant, Wollstone craft, Nietzsche, and Sartre. Upon completion, students should be able to identify and distinguish among the key positions of the philosophers studied. Primary sources are examined to understand the key philosophical ideas that have shaped the way we think.
Prerequisites: ENG 111. Corequisites: None. (On demand)

PHI 240 Introduction to Ethics (Coll/Tran) **3 0 0 3**
This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on 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. Primary sources are examined to better understand the background of ethical theories.
Prerequisites: ENG 111. Corequisites: None. (On demand)

PHOTOGRAPHY

PHO 110 Fund of Photography **3 6 0 5**
This course covers the basic technical aspects of photography, including camera controls, light and optics, flash, exposure, and processing. Emphasis is placed on principles of camera design and the relationship between subject and photographic image, with hands-on experience. Upon completion, students should be able to consistently produce technically excellent images.
Prerequisites: None. Corequisites: None. (F)

PHO 113 History of Photography **3 0 0 3**
This course introduces the history of photography from its inception through contemporary times. Emphasis is placed on technical and aesthetical developments in artistic and commercial photography. Upon completion, students should be able to identify significant photographers and procedures, trace the development of the medium, and discuss current trends in photography.
Prerequisites: None. Corequisites: None.

PHO 115 Basic Studio Lighting **2 6 0 4**
This course covers the basic principles of studio lighting. Topics include basic lighting techniques and application of lighting ratios to product illustration/portraiture using tungsten/electronic strobe sources, with emphasis on equipment maintenance and safety. Upon completion, students should be able to select and set up the best lights and lighting applications for a wide variety of photographic subjects.
Prerequisites: PHO 110. Corequisites: None. (S)

PHO 120 Intermediate Photography **2 4 0 4**
This course expands the coverage of photographic materials and provides an opportunity to experiment. Emphasis is placed on additional techniques and processes, including solarization, multiple-imaging, infrared toning, and other non-traditional uses of photography. Upon completion, students should be able to demonstrate how the choice of technique enhances the photographic subject and influences content.
Prerequisites: PHO 110. Corequisites: None. (S)

PHO 139 Intro to Digital Imaging **1 3 0 2**
This course introduces digital images by exploring the effect hardware and software have on the reproduction process. Topics include basic imaging tools and vocabulary, calibration, density, contrast, and color. Upon completion, students should be able to demonstrate a basic understanding of the digital imaging process and be able to capture and output images.
Prerequisites: None. Corequisites: None.

PHO 150 Portfolio Development I **3 3 0 4**
This course provides an opportunity to develop a thematically related portfolio of photographic images that are consistent in print quality. Emphasis is placed on subject/content development, choice of materials, and archival processing controls; organizing and sequencing images; editing; print finishing; and portfolio presentation. Upon completion, students should be able to edit and exhibit a consistent body of photographic prints in a portfolio presentation.
Prerequisites: PHO 120. Corequisites: None. (F)

PHO 180 Creative Problem Solving **1 4 0 3**
This course encourages the development of innovative photographic solutions to instructor-assigned tasks. Emphasis is placed on identifying components necessary to complete the task and applying creative solutions. Upon completion, students should be able to solve problems in a variety of photographic areas, combining media where needed to achieve the desired results.
Prerequisites: PHO 110 and permission of instructor.
Corequisites: None. (On demand)

PHO 216   Documentary Photography   2 4 0 4
This course introduces the practical, historical, and contemporary applications of documentary photography. Emphasis is placed on understanding the various approaches to creating a photographic documentary and how a documentary project can affect society. Upon completion, students should be able to produce a documentary project on a topic of interest to them.
Prerequisites : PHO 110. Corequisites: None.

PHO 217   Photojournalism I   1 6 0 4
This course covers logistics and techniques used in current professional newspaper photography. Topics include detailed study of spot and general news, sports, and feature photography along with basic newspaper layout, advanced photographic techniques, and legal issues. Upon completion, students should be able to demonstrate an understanding of basic aspects of news, sports, and feature photography.
Prerequisites: PHO 110. Corequisites: None. (S)

PHO 219   Digital Applications   1 3 0 2
This course provides additional experience in digital photography including input/output and computer manipulation of images. Topics include legal and ethical issues and commonly used hardware and software packages, including their basic controls and imaging tools. Upon completion, students should be able to input/output images and manipulate images.
Prerequisites: PHO 139. Corequisites: None.

PHO 220   Business of Photography   3 0 0 3
This course covers the business practices of photography with emphasis on freelance photography. Topics include copyright, payment fees, client relations, licenses, insurance, assignments, stock sales, and usage rates. Upon completion, students should be able to demonstrate an understanding of the photographic business, including billing, clients, copyright protection, and obtaining assignments.
Prerequisites: None. Corequisites: None. (S)

PHO 224   Multimedia Production   2 3 0 3
This course covers various aspects of computer based multimedia production. Topics include sound recording and editing techniques and software, multimedia software, control of image and continuity and pacing, script writing, copyright laws and ethics. Upon completion, students should be able to use computer hardware and software for multimedia production.
Prerequisites: PHO 110. Corequisites: None. (S)

PHO 226   Portraiture   3 3 0 4
This course covers the techniques of contemporary studio and location portraiture. Topics include lighting techniques, lighting ratios, available light to multiple light setups, posing techniques, and styles of glamour, fashion, corporate, and public relations portraiture. Upon completion, students should be able to choose the appropriate lighting, accessories, and posing style to produce a successful portrait. Formal and candid wedding photography will also be a part of the course of study.
Prerequisites: PHO 115. Corequisites: None. (F)

PHO 235   Commercial Photography   2 4 0 4
This course covers the techniques of advertising photography used in the print media. Emphasis is placed on the conception, lighting, and creation of photographic illustration used for food, fashion, and product photography. Upon completion, students should be able to produce advertising photographs for professional photographic illustration.
Prerequisites: PHO 115. Corequisites: None. (S)

PHO 250   Portfolio Development II   2 4 0 4
This course provides an opportunity to develop a diversified professional portfolio of photographs. Emphasis is placed on the development of a portfolio exhibiting technical excellence, consistency of vision, and professional presentation. Upon completion, students should be able to present a diversified portfolio of professional quality photographs to potential employers.
Prerequisites: PHO 217, PHO 226, PHO 235. Corequisites: None. (S)

PHYSICAL SCIENCE

PHS 130   Earth Science (Coll/Tran)   **3 2 0 4**
This course is a survey of the forces that impact the earth. Topics include geology, oceanography, and meteorology. Upon completion, students should be able to explain and identify the forces within, on, and around the earth as they influence the earth's dynamics.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (On demand)

PHYSICS

PHY 110   Conceptual Physics (Coll/Tran)   **3 0 0 3**
This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050; RED 090 **or** appropriate placement test scores. Corequisites: PHY 110A. (F,S)

PHY 110A   Conceptual Physics Lab (Coll/Tran)   **0 2 0 1**
This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110.
Prerequisites: None. Corequisites: PHY 110. (F,S)

PHY 121   Applied Physics I   3 2 0 4
This algebra-based course introduces fundamental physical concepts as applied to industrial and service technology fields. Topics include systems of units, problem-solving methods, graphical analyses, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to demonstrate an understanding of the principles studied as applied in industrial and service fields.
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050; RED 090 **or** appropriate placement test scores. Corequisites: ENG 111. (S)

PHY 131   Physics-Mechanics   3 2 0 4
This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.   MAT 122 or MAT 172 is recommended prior to or concurrently with this course.
Prerequisites: MAT 121 **or** MAT 161 **or** MAT 171 **or** MAT 175 (must pass with a grade of "C" or higher); RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S)

PHY 132   Physics-Elec & Magnetism   3 2 0 4
This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, waves, electricity, magnetism, circuits, transformers, motors, and generators. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.
Prerequisites: PHY 131 must pass with a grade of "C" or higher.
Corequisites: None. (S)

PHY 133   Physics-Sound & Light   3 2 0 4
This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, wave motion, sound, light, and modern physics. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.
Prerequisites: PHY 131. Corequisites: None. (On demand)

PHY 151 College Physics I (Coll/Tran) **3 2 0 4**
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. MAT 122 or MAT 172 is recommended prior to or concurrently with this course.
Prerequisites: MAT 161 **or** MAT 171 **or** MAT 175 (must pass with a grade of "C" or higher); RED 090 **or** appropriate placement test score. Corequisites: None. (F,S)

PHY 152 College Physics II (Coll/Tran) **3 2 0 4**
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: PHY 151 must pass with a grade of "C" or higher.
Corequisites: None. (S)

PHY 153 Modern Topics in Physics (Coll/Tran) **3 2 0 4**
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include atomic structure, nuclear processes, natural and artificial radioactivity, basic quantum theory, and special relativity. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. Additional topics may include principles of waves, light, and applications of basic quantum processes in lasers and fiber optics.
Prerequisites: PHY 151. Corequisites: None. (On demand)

PHY 251 General Physics I (Coll/Tran) **3 3 0 4**
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: MAT 271 must pass with a grade of "C" or higher; RED 090 **or** appropriate placement test score. Corequisites: MAT 272. (F)

PHY 252 General Physics II (Coll/Tran) **3 3 0 4**
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: MAT 272, PHY 251 (must pass with a grade of "C" or higher).
Corequisites: None. (S)

PHY 253 Modern Physics (Coll/Tran) **3 3 0 4**
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include atomic structure, nuclear processes, natural and artificial radioactivity, quantum theory, and special relativity. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: PHY 251. Corequisites: None. (On demand)

PHYSICAL FITNESS TECHNOLOGY

PSF 110 Exercise Science **4 0 0 4**
This course is a survey of scientific principles, methodologies, and research as applied to exercise and physical adaptations to exercise. Topics include the basic elements of kinesiology, biomechanics, and motor learning. Upon completion, students should be able to identify and describe physiological responses and adaptations to exercise.
Prerequisites: None. Corequisites: None. (F)

PSF 111 Fitness & Exer Testing I **3 2 0 4**
This course introduces the student to graded exercise testing. Topics include various exercise testing protocols with methods for prescribing exercise programs based on exercise tolerance tests and the use of various equipment and protocols. Upon completion, students should be able to conduct specific exercise tests and the use of various equipment.
Prerequisites: None. Corequisites: None. (S)

PSF 114 Phys Fit Theory & Instr **4 0 0 4**
This course provides information about related components of fitness and general information about the industry. Topics include the study of the components of fitness, theories of exercise and fitness, and information about the industry. Upon completion, students should be able to identify fitness components and demonstrate these in an exercise setting.
Prerequisites: PSF 110. Corequisites: None. (S)

PSF 116 Pvnt & Care Exer Injuries **2 2 0 3**
This course provides information about the care and prevention of exercise injuries. Topics include proper procedures, prevention techniques, and on-site care of injuries. Upon completion, students should be able to demonstrate the knowledge and skills necessary to prevent and care for exercise related injuries.
Prerequisites: None. Corequisites: None. (F)

PSF 118 Fitness Facility Mgmt **4 0 0 4**
This course provides information about the management and operation of health and fitness facilities and programs. Topics include human resources, sales and marketing, member retention, financial management, facility design and maintenance, and risk management. Upon completion, students should be able to demonstrate the knowledge and skills necessary to effectively manage a fitness facility.
Prerequisites: None. Corequisites: None. (S)

PSF 120 Group Exer Instruction **2 2 0 3**
This course introduces the concepts and guidelines of instructing exercise classes. Topics include program designs, working with special populations, and principles of teaching and monitoring physical activity. Upon completion, students should be able to demonstrate basic skills in instructing an exercise class and monitoring workout intensity.
Prerequisites: PSF 110. Corequisites: None. (F)

PSF 210 Personal Training **2 2 0 3**
This course introduces the student to the aspects of personal (one-on-one) training. Topics include training systems, marketing, and program development. Upon completion, students should be able to demonstrate personal training techniques and competencies of same.
Prerequisites: PSF 110, PSF 111. Corequisites: None. (S)

PSF 212 Exercise Programming **2 2 0 3**
This course provides information about organizing, scheduling, and implementation of physical fitness programs. Topics include programming for various age groups, competitive activities and special events, and evaluating programs. Upon completion, students should be able to organize and implement exercise activities in a competent manner.
Prerequisites: PSF 110. Corequisites: None. (S)

PSF   214   Health and Fitness Law   3 0 0 3
This course is designed to build a greater awareness and understanding of laws and legal issues encountered in the health and fitness industry. Topics include federal/state regulations, historical/current practices, risk management, torts, employment, discrimination, contracts, waivers, health/fitness screening, client confidentiality, facility safety, equipment liability, and emergency procedures. Upon completion, students should be able to demonstrate an understanding of the legal system to prevent or minimize liability in a fitness setting.
Prerequisites: None. Corequisites: None. (On demand)

PSF   218   Lifestyle Chng & Wellness   3 2 0 4
This course introduces health risk appraisals and their application to lifestyle changes. Topics include nutrition, weight control, stress management, and the principles of exercise. Upon completion, students should be able to conduct health risk appraisals and apply behavior modification techniques in a fitness setting.
Prerequisites: None. Corequisites: None. (S)

POLITICAL SCIENCE

POL   110   Intro Political Science (Coll/Tran)   **3 0 0 3**
This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and sovereignty in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

POL   120   American Government (Coll/Tran)   **3 0 0 3**
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.
Prerequisites: RED 090 **or** appropriate placement test score. Corequisites: None. (S)

POL   130   State & Local Government (Coll/Tran)   **3 0 0 3**
This course includes state and local political institutions and practices in the context of American federalism. Emphasis is placed on procedural and policy differences as well as political issues in state, regional, and local governments of North Carolina. Upon completion, students should be able to identify and discuss various problems associated with intergovernmental politics and their effect on the community and the individual.
Prerequisites: RED 090 **or** appropriate placement test score. Corequisites: None. (F)

PRINTING

PRN   155   Screen Printing I   1 3 0 2
This course covers screen printing techniques and materials. Topics include methods, materials, design, and image and stencil preparation techniques. Upon completion, students should be able to produce single- or multi-color projects.
Prerequisites: None. Corequisites: None. (S)

PRN   156   Screen Printing II   1 3 0 2
This course is a continuation of PRN 155. Emphasis is placed on advanced techniques and current industry practices. Upon completion, students should be able to produce multi-color projects utilizing various photographic stencil methods and substrates.
Prerequisites: PRN 155. Corequisites: None. (S)

PRN   220   Offset Press Fundamentals   1 3 0 2
This course is designed to provide the fundamental skills required to set up and operate an offset press. Emphasis is placed on set-up, press operation, maintenance, and troubleshooting of single-color jobs on various paper stock on sheet-fed offset presses and duplicators. Upon completion, students should be able to produce commercial-quality single-color work.
Prerequisites: None. Corequisites: None. (S)

PRN   240   Print Estimating/Planning   3 0 0 3
This course covers printing economics, development of cost centers, job flow throughout departments, and material and labor costs. Topics include budgeted, hourly, cost-rate derivation; production standards and data; and analysis of other estimating procedures including computer-assisted estimating. Upon completion, students should be able to demonstrate an understanding of economic factors of the printing industry and determine all production costs of printed jobs.
Prerequisites: GRA 121. Corequisites: None. (S)

POLYSOMNOGRAPHY

PSG   110   Intro to Polysomnography   3 2 0 4
This course introduces the polysomnography profession. Topics include the history of the profession and role of the polysomnographic technologist, communication, time management, infection control, basic patient assessment, and medical gas therapy. Upon completion, students should be able to demonstrate competence in concepts through written and laboratory evaluations.
Prerequisites: None. Corequisites: None. (F)

PSG   111   Neuro/Cardiopulmonary A&P   4 0 0 4
This course provides a concentrated study of anatomy and physiology essential to the practice of polysomnography. Emphasis is placed on the physiology of the nervous, cardiovascular, and pulmonary systems and basic pharmacological principles. Upon completion, students should be able to demonstrate competence in concepts through written evaluation.
Prerequisites: BIO 163; **or** BIO 168 **and** BIO 169. Corequisites: None. (S)

PSG   112   PSG Fundamentals   3 0 0 3
This course provides the knowledge and skills necessary to manage/function in a polysomnographic laboratory. Topics include recordkeeping, scheduling techniques, creation/implementation of departmental policies, reimbursement, the technologist's role as sleep advocate, and case management/patient education. Upon completion, students should be able to demonstrate competence in concepts through written evaluation.
Prerequisites: None. Corequisites: None. (S)

PSG   189   Polysomnog Transition   1 3 3 3
This course introduces the basic fundamentals for polysomnography. Emphasis is placed on cardiopulmonary assessment and monitoring, medical gas therapy, principles of case management, wellness promotion, recordkeeping, reimbursement, and exposure to the clinical setting. Upon completion, students should be prepared to apply the above concepts to the field of polysomnography.
Prerequisites: None. Corequisites: None. (On demand)

PSG   210   Polysomnography I   3 2 9 7
This course provides entry-level didactic, laboratory, and clinical training in polysomnography. Emphasis is placed on medical terminology, instrumentation setup and calibration, recording and monitoring techniques, and patient technologist interactions. Upon completion, students should be able to demonstrate competence in concepts and procedures through written, laboratory and clinical evaluations.
Prerequisites: PSG 111 **or** PSG 189. Corequisites: None. (F)

PSG   211   Polysomnography II   2 6 9 7
This course provides advanced-level didactic, laboratory, and clinical training in polysomnography. Emphasis is placed on the knowledge and skills necessary to obtain and evaluate high quality sleep recordings. Upon completion, students should be able to demonstrate competence in concepts and procedures through written, laboratory and clinical evaluations
Prerequisites: PSG 210. Corequisites: None. (S)

PSG   212   Infant/Pediatric PSG   3 2 0 4
This course provides the knowledge and skills to perform and score polysomnographic procedures on infants and pediatric patients. Emphasis is placed on infant/pediatric assessment, monitoring, and sleep disorders. Upon completion, students should be able to demonstrate competence in concepts through written and laboratory evaluations.
Prerequisites: None. Corequisites: None. (S)

PSG   213   Case Study/Exam Review   0 3 0 1
This course provides an opportunity to review clinical cases and prepare for the polysomnography credentialing exam. Emphasis is placed on case management and review for the Registered Polysomnographic Technologist Exam. Upon completion, students should be able to successfully complete practice exams. Prerequisites: None. Corequisites: None. (S)

PSG   214   PSG Clinical Apps I   0 2 0 1
This course provides practical application of theories covered in previous PSG courses. Emphasis is placed on polysomnography testing and procedures. Upon completion, students should be able to demonstrate competence through laboratory evaluation.
Prerequisites: None. Corequisites: None. (F)

PSYCHOLOGY

PSY   110   Life Span Development   3 0 0 3
This course provides an introduction to the study of human growth and development. Emphasis is placed on the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span and apply this knowledge to their specific field of study.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

PSY   150   General Psychology (Coll/Tran)   **3 0 0 3**
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

PSY   211   Psychology of Adjustment (Coll/Tran)   **3 0 0 3**
This course introduces the study of the adjustment process focusing on contemporary challenges individuals must deal with in everyday life. Topics include theories of behavior, career choices, self-understanding, coping mechanisms, human relationships, intimacy, sociocultural factors influencing healthy personal adjustment, and other related topics. Upon completion, students should be able to demonstrate an awareness of the processes of adjustment.
Prerequisites : PSY 150 must pass with a grade of "C" or higher. Corequisites: None.

PSY   231   Forensic Psychology (Coll/Tran)   **3 0 0 3**
This course introduces students to concepts which unite psychology and the legal system. Topics include defining competency, insanity, involuntary commitment as well as introducing forensic assessment techniques, such as interviewing process, specialized assessments, and collecting collateral information. Upon completion, students should be able to demonstrate knowledge in areas of forensic psychology: risk assessment, criminal competencies, insanity, psychopathology, and mentally disordered offenders.
Prerequisites: PSY 150 must pass with a grade of "C" or higher.
Corequisites: None. (On demand)

PSY   237   Social Psychology (Coll/Tran)   **3 0 0 3**
This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social influences on behavior.
Prerequisites: PSY 150 **or** SOC 210 (must pass with a grade of "C" or higher); RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S)

PSY   239   Psychology of Personality (Coll/Tran) **3 0 0 3**
This course covers major personality theories and personality research methods. Topics include psychoanalytic, behavioristic, social learning, cognitive, humanistic, and trait theories including supporting research. Upon completion, students should be able to compare and contrast traditional and contemporary approaches to the understanding of individual differences in human behavior.
Prerequisites: PSY 150 must pass with a grade of "C" or higher.
Corequisites: None. (On demand)

PSY   241   Developmental Psych (Coll/Tran)   **3 0 0 3**
This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span.
Prerequisites: PSY 150 must pass with a grade of "C" or higher.
Corequisites: None. (F,S, and on demand)

PSY   243   Child Psychology (Coll/Tran)   **3 0 0 3**
This course provides an overview of physical, cognitive, and psychosocial development from conception through adolescence. Topics include theories and research, interaction of biological and environmental factors, language development, learning and cognitive processes, social relations, and moral development. Upon completion, students should be able to identify typical and atypical childhood behavior patterns as well as appropriate strategies for interacting with children.
Prerequisites: PSY 150 must pass with a grade of "C" or higher.
Corequisites: None.   (F, On demand)

PSY   244   Child Development I   3 0 0 3
This course provides an introduction to the study of child development and examines the growth and development of children from conception through early childhood. Topics include historical and theoretical perspectives, terminology, research and observation techniques as well as physical, cognitive, and psychosocial growth and change. Upon completion, students should be able to demonstrate an understanding of the early stages of child development.
Prerequisites: None. Corequisites: None. (On demand)

PSY   245   Child Development II   3 0 0 3
This course examines the growth and development of children during early and middle childhood. Emphasis is placed on factors influencing physical, cognitive, and psychosocial growth and change. Upon completion, students should be able to demonstrate an understanding of early and middle child development.
Prerequisites: None. Corequisites: None. (On demand)

PSY   246   Adolescent Psychology (Coll/Tran)   **3 0 0 3**
This course provides an overview of the behavior patterns, life changes, and social issues that accompany the developmental stage of adolescence. Topics include developmental theories; physical, cognitive and psychosocial growth; transitions to young adulthood; and sociocultural factors that influence adolescent roles in home, school and community. Upon completion, students should be able to identify typical and atypical adolescent behavior patterns as well as appropriate strategies for interacting with adolescents.
Prerequisites: PSY 150 must pass with a grade of "C" or higher.
Corequisites: None. (F, On demand)

PSY   247   Psychology of Adulthood (Coll/Tran) **3 0 0 3**
This course examines the major theories and patterns of adult development from young adulthood to late adulthood. Topics include physical, cognitive, and psychosocial changes with an emphasis on relationships, family patterns, work roles, community interactions, and the challenges of each stage of adulthood. Upon completion, students should be able to demonstrate a knowledge of adult development and an ability to apply this knowledge to their own lives.
Prerequisites: PSY 150 must pass with a grade of "C" or higher.
Corequisites: None. (On demand)

PSY   263   Educational Psychology (Coll/Tran) **3 0 0 3**
This course examines the application of psychological theories and principles to the educational process and setting. Topics include learning and cognitive theories, achievement motivation, teaching and learning styles, teacher and learner roles, assessment, and developmental issues. Upon completion, students should be able to demonstrate an understanding of the application of psychological theory to educational practice.
Prerequisites: PSY 150 must pass with a grade of "C" or higher. Corequisites: None. (SU)

PSY   275   Health Psychology (Coll/Tran)   **3 0 0 3**
This course covers the biopsychosocial dynamics of stress and the maintenance of good health. Topics include enhancing health and well-being, stress management, lifestyle choices and attitudes, the mind-body relationship, nutrition, exercise, and fitness. Upon completion, students should be able to demonstrate an understanding of the psychological factors related to health and well-being.
Prerequisite: PSY 150 must pass with a grade of "C" or higher. Corequisite: None. (On demand)

PSY 281 Abnormal Psychology (Coll/Tran) **3 0 0 3**
This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques.
Prerequisites: PSY 150 must pass with a grade of "C" or higher.
Corequisites: None. (F,S,SU)

RADIOGRAPHY

RAD 110 Rad Intro & Patient Care 2 3 0 3
This course provides an overview of the radiography profession and student responsibilities. Emphasis is placed on basic principles of patient care, radiation protection, technical factors, and medical terminology. Upon completion, students should be able to demonstrate basic skills in these areas.
Prerequisites: Admission to Radiography program.
Corequisites: RAD 111, RAD 151. (F)

RAD 111 RAD Procedures I 3 3 0 4
This course provides the knowledge and skills necessary to perform standard radiographic procedures. Emphasis is placed on radiography of the chest, abdomen, extremities, spine, and pelvis. Upon completion, students should be able to demonstrate competence in these areas.
Prerequisites: Admission to Radiography program.
Corequisites: RAD 110, RAD 151. (F)

RAD 112 RAD Procedures II 3 3 0 4
This course provides the knowledge and skills necessary to perform standard radiographic procedures. Emphasis is placed on radiography of the skull, bony thorax, and gastrointestinal, biliary, and urinary systems. Upon completion, students should be able to demonstrate competence in these areas.
Prerequisites: RAD 110, RAD 111, RAD 151. Corequisites: None. (S)

RAD 121 Radiographic Imaging I 2 3 0 3
This course provides the principles of conventional film-screen radiography. Emphasis is placed on the factors that impact density, contrast, recorded detail, and distortion. Upon completion, students should be able to demonstrate an understanding of conventional film-screen radiographic imaging.
Prerequisites: RAD 110, RAD 111, RAD 151. Corequisites: None. (S)

RAD 122 Radiographic Imaging II 1 3 0 2
This course provides advanced principles of imaging including digital radiography. Emphasis is placed on the factors that impact brightness, contrast, recorded detail, and distortion. Upon completion, students should be able to demonstrate an understanding of advanced principles of imaging.
Prerequisites: RAD 112, RAD 121, RAD 161.
Corequisites: RAD 131, RAD 171. (SU)

RAD 131 Radiographic Physics I 1 3 0 2
This course introduces the principles of radiation characteristics and production. Emphasis is placed on imaging equipment. Upon completion, students should be able to demonstrate a basic understanding of radiation characteristics and production.
Prerequisites: Enrollment in the Radiography Program.. Corequisites: None. (S)

RAD 151 RAD Clinical Ed I 0 0 6 2
This course introduces patient management and basic radiographic procedures in the clinical setting. Emphasis is placed on mastering positioning of the chest and extremities, manipulating equipment, and applying principles of ALARA. Upon completion, students should be able to demonstrate successful completion of clinical objectives.
Prerequisites: Admission to Radiography program.
Corequisites: RAD 110, RAD 111. (F)

RAD 161 RAD Clinical Ed II 0 0 15 5
This course provides additional experience in patient management and in more complex radiographic procedures. Emphasis is placed on mastering positioning of the spine, pelvis, head and neck, and thorax and adapting procedures to meet patient variations. Upon completion, students should be able to demonstrate successful completion of clinical objectives.
Prerequisites: RAD 110, RAD 111, RAD 151. Corequisites: RAD 112, RAD 121.(S)

RAD 171 RAD Clinical Ed III 0 0 12 4
This course provides experience in patient management specific to fluoroscopic and advanced radiographic procedures. Emphasis is placed on applying appropriate technical factors to all studies and mastering positioning of gastrointestinal and urological studies. Upon completion, students should be able to demonstrate successful completion of clinical objectives.
Prerequisites: RAD 112, RAD 121, RAD 161. Corequisites: RAD 122, RAD 131. (SU)

RAD 211 RAD Procedures III 2 3 0 3
This course provides the knowledge and skills necessary to perform standard and specialty radiographic procedures. Emphasis is placed on radiographic specialty procedures, sectional anatomy, and advanced imaging. Upon completion, students should be able to demonstrate competence in these areas.
Prerequisites: RAD 122. Corequisites: RAD 231, RAD 241, RAD 251. (F)

RAD 231 Radiographic Physics II 1 3 0 2
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, and equipment circuitry. Upon completion, students should be able to demonstrate an understanding of the application of physical concepts as related to image production.
Prerequisites: RAD 131 **or** RAD 171. Corequisites: RAD 211, RAD 241, **and** RAD 251. (F)

RAD 241 Radiobiology/Protection 2 0 0 2
This course covers the principles of radiation protection and radiobiology. Topics include the effects of ionizing radiation on body tissues, protective measures for limiting exposure to the patient and personnel, and radiation monitoring devices. Upon completion, students should be able to demonstrate an understanding of the effects and uses of radiation in diagnostic radiology.
Prerequisites: RAD 122, RAD 131, RAD 171.
Corequisites: RAD 211, RAD 231, RAD 251. (S)

RAD 245 Image Analysis 1 3 0 2
This course provides an overview of image analysis and introduces methods of quality management. Topics include image evaluation, pathology, quality control, and quality assurance. Upon completion, students should be able to demonstrate a basic knowledge of image analysis and quality management.
Prerequisites: RAD 211, RAD 231, RAD 241, RAD 251.
Corequisites: RAD 261. (S)

RAD 251 RAD Clinical Ed IV 0 0 21 7
This course provides the opportunity to continue mastering all basic radiographic procedures and to attain experience in advanced areas. Emphasis is placed on equipment operation, pathological recognition, pediatric and geriatric variations, and a further awareness of radiation protection requirements. Upon completion, students should be able to demonstrate successful completion of clinical objectives.
Prerequisites: RAD 122, RAD 131, RAD 171.
Corequisites: RAD 211, RAD 231, RAD 241. (F)

RAD 261 RAD Clinical Ed V 0 0 21 7
This course is designed to enhance expertise in all radiographic procedures, patient management, radiation protection, and image production and evaluation. Emphasis is placed on developing an autonomous approach to the diversity of clinical situations and successfully adapting to those procedures. Upon completion, students should be able to demonstrate successful completion of clinical objectives.
Prerequisites: RAD 251. Corequisites: RAD 245. (S)

RAD 271 Radiography Capstone 0 3 0 1
This course provides an opportunity to exhibit problem-solving skills required for certification. Emphasis is placed on critical thinking and integration of didactic and clinical components. Upon completion, students should be able to demonstrate the knowledge required of any entry-level radiographer.
Prerequisites: RAD 211, RAD 231, RAD 241, RAD 251.
Corequisites: RAD 245, RAD 261. (S)

RESPIRATORY THERAPY

RCP   110   Intro to Respiratory Care   3 3 0 4
This course introduces the respiratory care profession. Topics include the role of the respiratory care practitioner, medical gas administration, basic patient assessment, infection control, and medical terminology. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations. Competencies in the following procedures will prepare the students for clinical practice: aerosol/humidity, bronchial hygiene, hyperinflation, and airway management.
Prerequisites: Enrollment in the Respiratory Therapy program.
Corequisites: None. (F)

RCP   111   Therapeutics/Diagnostics   4 3 0 5
This course is a continuation of RCP 110. Emphasis is placed on entry-level therapeutic and diagnostic procedures used in respiratory care. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations. Competencies in the following procedures will prepare the students for clinical practice: electro cardiography, pulmonary function testing, blood gases, bedside monitoring, and introduction to mechanical ventilation.
Prerequisites: RCP 110. Corequisites: None. (S)

RCP   113   RCP Pharmacology   2 0 0 2
This course covers the drugs used in the treatment of cardiopulmonary diseases. Emphasis is placed on the uses, actions, indications, administration, and hazards of pharmacological agents. Upon completion, students should be able to demonstrate competence through written evaluations. This course includes indepth study of the following drug classifications: bronchodilators, surface active agents, corticosteroids, antibiotics, CNS agents, cardiovascular drugs, and neonatal/pediatric drugs.
Prerequisites: Enrollment in the Respiratory Therapy program.
Corequisites: None. (F)

RCP   114   C-P Anatomy & Physiology   3 0 0 3
This course provides a concentrated study of cardiopulmonary anatomy and physiology essential to the practice of respiratory care. Emphasis is placed on cardiovascular and pulmonary physiology, acid/base balance, and blood gas interpretation. Upon completion, students should be able to demonstrate competence in these concepts through written evaluation. This course includes an overview of the effects of renal failure, aging, exercise, high-altitude and high-pressure environments on the cardiopulmonary system.
Prerequisites: None. Corequisites: None. (F)

RCP   115   C-P Pathophysiology   2 0 0 2
This course introduces the etiology, pathogenesis, and physiology of cardiopulmonary diseases and disorders. Emphasis is placed on clinical signs and symptoms along with diagnoses, complications, prognoses, and management. Upon completion, students should be able to demonstrate competence in these concepts through written evaluations. Case study evaluation will be used to emphasize clinical practice guideline implementation in care plan development.
Prerequisites: None. Corequisites: None. (S)

RCP   122   Special Practice Lab   0 2 0 1
This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.
Prerequisites: None. Corequisites: None. (F)

RCP   123   Special Practice Lab   0 3 0 1
This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.
Prerequisites: None. Corequisites: None. (SU)

RCP   145   RCP Clinical Practice II   0 0 15 5
This course provides entry-level clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.
Prerequisites: RCP 110. Corequisites: RCP 111. (S)

RCP   152   RCP Clinical Practice III   0 0 6 2
This course provides entry-level clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.
Prerequisites: RCP 111. Corequisites: None. (SU)

RCP   210   Critical Care Concepts   3 3 0 4
This course provides further refinement of acute patient care and underlying pathophysiology. Topics include a continuation in the study of mechanical ventilation, underlying pathophysiology, and introduction of critical care monitoring. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations. Specific topics include: prevention of lung injury, independent lung ventilation, high frequency techniques, and infant mechanical ventilation.
Prerequisites: None. Corequisites: None. (F)

RCP   211   Adv Monitoring/Procedures   3 3 0 4
This course includes advanced information gathering and decision making for the respiratory care professional. Topics include advanced cardiac monitoring and special procedures. Upon completion, students should be able to evaluate, design, and recommend appropriate care plans through written and laboratory evaluations. This course prepares the student for ACLS certification.
Prerequisites: RCP 210. Corequisites: None. (S)

RCP   214   Neonatal/Ped's RC   1 3 0 2
This course provides in-depth coverage of the concepts of neonatal and pediatric respiratory care. Emphasis is placed on neonatal and pediatric pathophysiology and on the special therapeutic needs of neonates and children. Upon completion, students should be able to demonstrate competence in these concepts through written and laboratory evaluations. This course includes preparation for PALS and NRP certification.
Prerequisites: RCP 111. Corequisites: None. (F)

RCP   215   Career Prep-Adv Level   0 3 0 1
This course provides preparation for employment and the advanced-level practitioner credentialing exam. Emphasis is placed on review of the NBRC Advanced-Level Practitioner Exam and supervision and management. Upon completion, students should be able to successfully complete the appropriate self-assessment examinations and meet the requirements for employment.
Prerequisites: None. Corequisites: None. (S)

RCP   236   RCP Clinical Practice IV   0 0 18 6
This course provides advanced practitioner clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.Prerequisites: RCP 111. Corequisites: RCP 210. (F)

RCP   247   RCP Clinical Practice V   0 0 21 7
This course provides advanced practitioner clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.
Prerequisites: RCP 210. Corequisites: RCP 211. (S)

READING

RED   070   Essential Reading Skills   3 2 0 4
This course is designed to strengthen reading skills. Emphasis is placed on basic word attack skills, vocabulary, transitional words, paragraph organization, basic comprehension skills, and learning strategies. Upon completion, students should be able to demonstrate competence in the skills required for RED 080.
Prerequisites: None. Corequisites: None. (F,S,SU)

RED   080   Intro to College Reading   3 2 0 4
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.
Prerequisites: RED 070 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

RED 090   Improved College Reading   3 2 0 4
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; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material.
Prerequisites: RED 080 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

RELIGION

REL 110   World Religions (Coll/Tran)   **3 0 0 3**
This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. Attention will also be given to current practices and historical influences.
Prerequisites: None. Corequisites: None. (F,S)

REL 211   Intro to Old Testament (Coll/Tran)   **3 0 0 3**
This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature.
Prerequisites: None. Corequisites: None. (S)

REL 212   Intro to New Testament (Coll/Tran)   **3 0 0 3**
This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature.
Prerequisites: None. Corequisites: None. (F,SU)

REL 221   Religion in America (Coll/Tran)   **3 0 0 3**
This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America. Some attention will be given to religious beliefs and practices in the South.
Prerequisites: None. Corequisites: None. (F,S,SU)

REAL ESTATE

RLS 112   Broker Prelicensing   5 0 0 5
This course provides basic instruction in real estate principles and practices. Topics include law, finance, brokerage, closing, valuation, management, taxation, mathematics, construction, land use, property insurance, and NC License Law and Commission Rules. Upon completion, students should be able to demonstrate basic knowledge and skills necessary for real estate sales.
Prerequisites: None. Corequisites: None. (F,S)

RLS 113   Real Estate Mathematics   2 0 0 2
This course provides basic instruction in business mathematics applicable to real estate situations. Topics include area computations, percentage of profit/loss, bookkeeping and accounting methods, appreciation and depreciation, financial calculations and interest yields, property valuation, insurance, taxes, and commissions. Upon completion, students should be able to demonstrate proficiency in applied real estate mathematics.
Prerequisites: None. Corequisites: None. (F,S)

INFORMATION SYSTEMS SECURITY

SEC 110   Security Concepts   2 2 0 3
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.
Prerequisites: None. Corequisites: None. (F)

SEC 150   Secure Communications   2 2 0 3
This course provides an overview of current technologies used to provide secure transport of information across networks. Topics include data integrity through encryption, Virtual Private Networks, SSL, SSH, and IPSec. Upon completion, students should be able to implement secure data transmission technologies.
Prerequisites: SEC 110, NET 125, NOS 110. Corequisites: None. (S)

SEC 160   Secure Admin I   2 2 0 3
This course provides an overview of security administration and fundamentals of designing security architectures. Topics include networking technologies, TCP/IP concepts, protocols, network traffic analysis, monitoring, and security best practices. Upon completion, students should be able to identify normal network traffic using network analysis tools and design basic security defenses.
Prerequisites: SEC 110, NET 125. Corequisites: None. (F)

SEC 210   Intrusion Detection   2 2 0 3
This course introduces the student to intrusion detection methods in use today. Topics include the types of intrusion detection products, traffic analysis, and planning and placement of intrusion detection solutions. Upon completion, students should be able to plan and implement intrusion detection solution for networks and host based systems.
Prerequisites: SEC 160. Corequisites: None. (S)

SEC 220   Defense-In-Depth   2 2 0 3
This course introduces students to the concepts of defense in-depth, a security industry best practice. Topics include firewalls, backup systems, redundant systems, disaster recovery, and incident handling. Upon completion, students should be able to plan effective information security defenses, backup systems, and disaster recovery procedures.
Prerequisites: None. Corequisites: SEC 160. (F)

SEC 240   Wireless Security   2 2 0 3
This course introduces security principles and topics related to the wireless networking environment. Topics include network topologies, network protocols, security issues, and best practices for wireless environments. Upon completion, students should be able to design, setup, manage, and secure a wireless network.
Prerequisites: SEC 110 **and** NET 175. Corequisites: None. (S)

SEC 289   Security Capstone Project   1 4 0 3
This course provides the student the opportunity to put into practice all the skills learned to this point. Emphasis is placed on security policy, process planning, procedure definition, business continuity, and systems security architecture. Upon completion, students should be able to design and implement comprehensive information security architecture from the planning and design phase through implementation.
Prerequisites: SEC 220. Corequisites: None. (S)

SIMULATION AND GAME DEVELOPMENT

SGD 111 Introduction to SGD 2 3 0 3
This course provides students with an introduction to simulation and game development. Topics include setting, storytelling, narrative, character design, interface design, game play, internal economy, core mechanics, game genres, AI, the psychology of game design and professionalism. Upon completion, students should be able to demonstrate knowledge of the major aspects of simulation and game design and development.
Prerequisites: None. Corequisites: None. (On demand)

SGD 112 SGD Design 2 3 0 3
This course introduces the fundamentals of simulation and game design. Topics include industry standards and design elements for simulations and games. Upon completion, students should be able to design simple simulations and/or games.
Prerequisites: None. Corequisites: None. (On demand)

SGD 114 3D Modeling 2 3 0 3
This course introduces the tools required to create three dimensional (3D) models. Emphasis is placed on exploring tools used to create 3D models. Upon completion, students should be able to create and animate 3D models using 3D modeling tools.
Prerequisites: None. Corequisites: None. (On demand)

SOCIOLOGY

SOC 210 Introduction to Sociology (Coll/Tran) 3 0 0 3
This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

SOC 213 Sociology of the Family (Coll/Tran) 3 0 0 3
This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S,SU)

SOC 215 Group Processes (Coll/Tran) 3 0 0 3
This course introduces group processes and dynamics. Emphasis is placed on small group experiences, roles and relationships within groups, communication, cooperation and conflict resolution, and managing diversity within and among groups. Upon completion, students should be able to demonstrate the knowledge and skills essential to analyze group interaction and to work effectively in a group context.
Prerequisites: None. Corequisites: None.

SOC 220 Social Problems (Coll/Tran) 3 0 0 3
This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (F,S)

SOC 225 Social Diversity (Coll/Tran) 3 0 0 3
This course provides a comparison of diverse roles, interests, opportunities, contributions, and experiences in social life. Topics include race, ethnicity, gender, sexual orientation, class, and religion. Upon completion, students should be able to analyze how cultural and ethnic differences evolve and how they affect personality development, values, and tolerance.
Prerequisites: RED 090 **or** appropriate placement test score. Corequisites: None. (F)

SOC 230 Race and Ethnic Relations (Coll/Tran) 3 0 0 3
This course includes an examination of the various aspects of race and ethnicity and how these lead to different experiences, opportunities, problems, and contributions. Topics include prejudice, discrimination, perceptions, myths, stereotypes, and intergroup relationships. Upon completion, students should be able to identify and analyze relationships among racial and ethnic groups within the larger society.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

SOC 234 Sociology of Gender (Coll/Tran) 3 0 0 3
This course examines contemporary roles in society with special emphasis on recent changes. Topics include sex role socialization, myths and stereotypes, gender issues related to family, work, and power. Upon completion, students should be able to analyze modern relationships between men and women.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

SOC 242 Sociology of Deviance (Coll/Tran) 3 0 0 3
This course provides an overview of deviant behavior and the processes involved in its definition, causation, prevention, control, and treatment. Topics include theories of causation, social control, delinquency, victimization, criminality, the criminal justice system, punishment, rehabilitation, and restitution. Upon completion, students should be able to identify and analyze issues surrounding the nature and development of social responses to deviance.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

SOC 244 Soc of Death & Dying (Coll/Tran) 3 0 0 3
This course presents sociological perspectives on death and dying. Emphasis is placed on analyzing the different death rates among various groups, races, and societies, as well as various types of death. Upon completion, students should be able to discuss the rituals of death, both cultural and religious, and examine current issues relating to death and dying.
Prerequisites: None. Corequisites: None. (F)

SOC 250 Sociology of Religion (Coll/Tran) 3 0 0 3
This course examines religion from a sociological perspective as part and product of human society. Topics include the origins, development, and functions of belief systems; religious organizations; conversion; and interactions with politics, the economy, science, and the class system. Upon completion, students should be able to describe and analyze religious systems.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

SOC 254 Rural and Urban Sociology (Coll/Tran) 3 0 0 3
This course applies sociological concepts to a comparative study of major social issues facing contemporary rural and urban America. Emphasis is placed on growth and development patterns, ecological factors, social organizations, social controls, and processes of change. Upon completion, students should be able to illustrate the differences and similarities that exist between urban and rural environments as they resolve contemporary issues.
Prerequisites: RED 090 **or** appropriate placement test score.
Corequisites: None. (On demand)

SPANISH

SPA 111 Elementary Spanish I (Coll/Tran) 3 0 0 3
This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness.
Prerequisites: None. Corequisites: SPA 181. (F,S,SU)

SPA 112 Elementary Spanish II (Coll/Tran) 3 0 0 3
This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness.
Prerequisites: SPA 111 must pass with a grade of "C" or higher.
Corequisites: SPA 182. (F,S,SU)

SPA 120   Spanish for the Workplace   3 0 0 3
This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity. Prerequisites: None. Corequisites: None. (On demand)

SPA 141   Culture and Civilization (Coll/Tran)   **3 0 0 3**
This course provides an opportunity to explore issues related to the Hispanic world. Topics include historical and current events, geography, and customs. Upon completion, students should be able to identify and discuss selected topics and cultural differences related to the Hispanic world. Prerequisites: None. Corequisites: None. (On demand)

SPA 161   Cultural Immersion (Coll/Tran)   **2 3 0 3**
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. Prerequisites: SPA 111. Corequisites: None. (On demand)

SPA 181   Spanish Lab 1 (Coll/Tran)   **0 2 0 1**
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. Prerequisites: None. Corequisites: SPA 111. (F,S,SU)

SPA 182   Spanish Lab 2 (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate cultural awareness. Prerequisites: SPA 181 must pass with a grade of "C" or higher. Corequisites: SPA 112. (F,S,SU)

SPA 211   Intermediate Spanish I (Coll/Tran)   **3 0 0 3**
This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. Prerequisites: SPA 112 must pass with a grade of "C" or higher. Corequisites: SPA 281. (F,S,SU)

SPA 212   Intermediate Spanish II (Coll/Tran)   **3 0 0 3**
This course provides a continuation of SPA 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. Prerequisites: SPA 211 must pass with a grade of "C" or higher. Corequisites: SPA 282. (F,S,SU)

SPA 221   Spanish Conversation (Coll/Tran)   **3 0 0 3**
This course provides an opportunity for intensive communication in spoken Spanish. Emphasis is placed on vocabulary acquisition and interactive communication through the discussion of media materials and authentic texts. Upon completion, students should be able to discuss selected topics, express ideas and opinions clearly, and engage in formal and informal conversations. Prerequisites: SPA 212. Corequisites: None. (On demand)

SPA 281   Spanish Lab 3 (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. Prerequisties: SPA 182 must pass with a grade of "C" or higher. Corequisites: SPA 211. (F,S,SU)

SPA 282   Spanish Lab 4 (Coll/Tran)   **0 2 0 1**
This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. Prerequisties: SPA 281 must pass with a grade of "C" or higher. Corequisites: SPA 212. (F,S,SU)

SURGICAL TECHNOLOGY

SUR 110   Intro to Surg Tech   3 0 0 3
This course provides a comprehensive study of peri-operative care, patient care concepts, and professional practice concepts within the profession of surgical technology. Topics include: introductory concepts, organizational structure and relationships, legal, ethical and moral issues, medical terminology, pharmacology, anesthesia, wound healing management concepts, and the technological sciences. Upon completion, students should be able to apply theoretical knowledge of the course topics to the practice of surgical technology. Prerequisites: CTS 080 **or** appropriate test score; Enrollment in the Surgical Technology program. Corequisites: ACA 111, BIO 163, ENG 111, SUR 111. (F)

SUR 111   Periop Patient Care   5 6 0 7
This course provides the surgical technology student the theoretical knowledge required to function in the pre-operative, intra-operative, and post-operative role. Topics include asepsis, disinfection and sterilization, physical environment, instrumentation, equipment, peri-operative patient care, and peri-operative case management. Upon completion, students should be able to apply the principles and practice of the peri-operative team member to the operative environment. Prerequisites: CTS 080 **or** appropriate test score; Enrollment in the Surgical Technology program. Corequisites: ACA 111, BIO 163, ENG 111, SUR 110. (F)

SUR 122   Surgical Procedures I   5 3 0 6
This course provides an introduction to selected basic and intermediate surgical specialties that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment. Prerequisites: BIO 163, ENG 111, SUR 110, SUR 111. Corequisites: BIO 175, PSY 150, SUR 123. (S)

SUR 123   SUR Clinical Practice I   0 0 21 7
This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles. Prerequisites: SUR 110, SUR 111. Corequisites: SUR 122. (S)

SUR 134   Surgical Procedures II   5 0 0 5
This course provides a comprehensive study of intermediate and advanced surgical specialties that students are exposed to in the second clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment. Prerequisites: SUR 123. Corequisites: None. (SU)

SUR 135   SUR Clinical Practice II   0 0 12 4
This course provides clinical experience with a variety of perioperative assignments to build skills required for complex perioperative patient care. Emphasis is placed on greater technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. Upon completion, students should be able to function in the role of an entry-level surgical technologist.
Prerequisites: BIO 175, PSY 150, SUR 123.
Corequisites: SUR 134, SUR 137. (SU)

SUR 137   Prof Success Prep   1 0 0 1
This course provides employability skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, interviewing strategies, communication skills, and teamwork concepts. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.
Prerequisites: SUR 123. Corequisites: SUR 134, SUR 135. (SU)

TURFGRASS MANAGEMENT

TRF 110   Intro Turfgrass Cult & ID   3 2 0 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.
Prerequisites: None. Corequisites: None. (F,SU)

TRF 120   Turfgrass Irrigat & Design   2 4 0 4
This course covers the basic techniques involved in the design, layout, installation, and use of turfgrass irrigation systems. Topics include types of irrigation systems, components of the systems, materials available for use, and economic considerations. Upon completion, students should be able to complete a functional design for a turfgrass irrigation system.
Prerequisites: None. Corequisites: None. (S)

TRF 125   Turfgrass Computer App   1 3 0 2
This course introduces basic computer applications for the turfgrass industry. Emphasis is placed on computer software applications for irrigation design, management, and budget planning for turfgrass applications. Upon completion, students should be able to use appropriate software for various turfgrass management applications.
Prerequisites: None. Corequisites: None. (F)

TRF 130   Native Flora ID   1 3 0 2
This course covers identification of selected native ground covers and woodland trees by summer and/or winter characteristics. Emphasis is placed on mature age, fall colors, site adaptability, and habit of growth for special turf-related areas. Upon completion, students should be able to identify native plants by size and leaf, bud, twig, and limb formation.
Prerequisites: None. Corequisites: None. (F)

TRF 140   Turfgrass Mgmt Safety   2 2 0 3
This course introduces the dangers and problems that may be faced in the turfgrass management profession. Emphasis is placed on the possible prevention and treatment that may be necessary as well as basic first aid treatment. Upon completion, students should be able to demonstrate effective leadership skills in various professional emergency scenarios.
Prerequisites: None. Corequisites: None. (F)

TRF 150   Landscape Drafting   1 3 0 2
This course introduces the equipment, software, and skills involved in landscape drafting. Emphasis is placed on creating geometrical constructions and visualizing and drawing scaled profile views of various turfgrass-related sites. Upon completion, students should be able to produce competent landscape drawings.
Prerequisites: None. Corequisites: None. (F)

TRF 151   Intro Landscape Design   2 2 0 3
This course covers the principles and practices of landscape design with application to landscape problems associated with lawn areas. Topics include site analysis, drafting techniques, cost estimating, plant selection, and presentation of plans. Upon completion, students should be able to design and install a landscape plan.
Prerequisites: None. Corequisites: None. (S)

TRF 152   Landscape Maintenance   2 2 0 3
This course introduces the tasks of landscape maintenance. Emphasis is placed on lawns, shrubs, trees, flowers, and ground covers. Upon completion, students should be able to maintain a landscape area on a year-round schedule.
Prerequisites: None. Corequisites: None. (F)

TRF 210   Turfgrass Eqmt Mgmt   1 4 0 3
This course covers the operation and maintenance of specialized turfgrass management equipment. Topics include small engine use and repair; operation, maintenance, and repair of turfgrass management equipment; organization of shop areas; and safety considerations. Upon completion, students should be able to operate and maintain turfgrass management equipment.
Prerequisites: None. Corequisites: None. (S)

TRF 220   Turfgrass Calculations   2 0 0 2
This course introduces the specific math concepts and calculations necessary in the turfgrass industry. Emphasis is placed on calibration of equipment used in the application of fertilizers and pesticides and calculation of solid materials used in construction. Upon completion, students should be able to correctly perform basic calculations and calibrations and estimate materials needed in specific professional turfgrass management situations.
Prerequisites: None. Corequisites: None. (S)

TRF 230   Turfgrass Mgmt Apps   1 2 0 2
This course introduces specific sports field design, installation, and maintenance. Topics include natural grass croquet courts and baseball, soccer, and football fields. Upon completion, students should be able to perform specific tasks in layout, field marking, and preparing for tournament play.
Prerequisites: None. Corequisites: None. (S)

TRF 240   Turfgrass Pest Control   2 2 0 3
This course covers detection and identification of turfgrass pests with emphasis on methods of control or eradication. Topics include weeds, insects, diseases, and nematodes identification with an understanding of pesticides used, application procedures, and costs involved in control programs. Upon completion, students should be able to identify turfgrass pests, select the proper pesticide, develop pest control programs, and/or use integrated pest management.
Prerequisites: None. Corequisites: None. (F)

TRF 250   Golf /Sport Field Const   2 4 0 4
This course provides information for layout, materials, and construction of special recreational applications. Emphasis is placed on site selection, equipment, safety regulations, drainage, turfgrass species, and irrigation needs. Upon completion, students should be able to locate construction reference sites and develop drainage and irrigation plans from their own blueprints and topo map designs.
Prerequisites: None. Corequisites: None. (S)

TRF 260   Adv Turfgrass Mgmt   3 2 0 4
This course covers the principles and practices involved in turfgrass management. Topics include choosing the best management practice in mowing, pest control, fertilization, irrigation, traffic control, air control, budgeting, and materials procurement. Upon completion, students should be able to demonstrate knowledge of the principles covered and select and apply the best practices in turfgrass management.
Prerequisites: TRF 110. Corequisites: None. (S)

TRANSPORTATION TECHNOLOGY

TRN 110   Intro to Transport Tech   1 2 0 2
This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.
Prerequisites: RED 080. Corequisites: CTS 080. (F,S)

TRN 120   Basic Transp Electricity   4 3 0 5
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.
Prerequisites: DMA 010, DAM 020, DMA 030, RED 080.
Corequisites: TRN 110. (F)

TRN 140   Transp Climate Control   1 2 0 2
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems.
Prerequisites: RED 080. Corequisites: TRN 110, TRN 140A. (F)

TRN 140A   Transp Climate Cont Lab   1 2 0 2
This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.
Prerequisites: None. Corequisites: TRN 140. (F)

TRN 170   Pc Skills for Transp   1 2 0 2
This course introduces students to personal computer literacy and Internet literacy with an emphasis on the transportation service industry. Topics include service information systems, management systems, computer-based systems, and PC-based diagnostic equipment. Upon completion, students should be able to access information pertaining to transportation technology and perform word processing.
Prerequisites: CTS 080, RED 080. Corequisites: None. (F)

UPHOLSTERY

UPH 100   Cutting   1 15 0 6
This course introduces a variety of upholstery cutting methods and techniques. Emphasis is placed on the correct use of patterns and cutting techniques. Upon completion, students should be able to place and adjust patterns onto fabric, demonstrate various cutting techniques and cut part to acceptable quality standards.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 101   Sewing   1 15 0 6
This course covers various methods and techniques of sewing upholstery covers. Emphasis is placed on machine operation, set-up, and maintenance; threading; sewing straight lines, corners, curves and welts. Upon completion students should be able to set up and operate a variety of standard sewing machines used for upholstery fabrics.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 102   Inside Upholstery   1 15 0 6
This course introduces the fundamental techniques required to perform inside upholstering on simple furniture styles. Topics include terminology and the techniques required to upholster seat decks, inside arms and backs and properly fit and adjust cushions to acceptable quality standards. Upon completion, students should be able to peel and upholster seat decks, inside arms and backs, and fit cushions.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 106   Pattern Making   1 15 0 6
This course covers the techniques and procedures for fabricating cutting patterns. Topics include frame measurement, pattern development, and pattern making. Upon completion, students should be able to fabricate a set of cutting patterns from an upholstery frame.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 107   Spring-Up   1 15 0 6
This course introduces the basic seat construction for simple furniture styles. Topics include webbing, lightweight springs, and basic eight-way hand tie construction. Upon completion, students should be able to develop basic seat construction for a variety of furniture styles.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 108   Outside Upholstery   1 15 0 6
This course introduces the fundamental techniques required to perform outside upholstering on simple furniture styles. Topics include padding, double covering, and deluxing. Upon completion, students should be able to cover the outside of simple furniture styles.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 111   Cutting & Pattrn Makng I   1 4 0 3
This course introduces making, selecting, identifying, and placing patterns on fabric; fabric characteristics; and cutting simple fabrics. Emphasis is placed on frame measurements, fabric characteristics, pattern placement, cutting techniques, and proper use of cutting tools. Upon completion, students should be able to develop a set of patterns and demonstrate cutting techniques and placement of patterns on fabric to industry standards.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 112   Cutting & Pattrn Makng II   1 4 0 3
This course covers advanced pattern making and cutting on a variety of fabrics and furniture styles. Emphasis is placed on making and cutting complex patterns for a variety of furniture styles and the use of patterned fabrics. Upon completion, students should be able to develop and cut patterns for a variety of complex furniture styles and fabric patterns.
Prerequisites: UPH 111. Corequisites: None. (F,S,SU)

UPH 121   Sewing I   1 4 0 3
This course introduces skills needed to sew upholstery covers using a standard sewing machine. Topics include machine maintenance, threading, and sewing straight lines, corners, curves, and welts. Upon completion, students should be able to operate and maintain a standard sewing machine for upholstery fabric.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 122   Sewing II   1 4 0 3
This course covers operation of more advanced equipment on complex fabric patterns and designs. Emphasis is placed on double needle, zipper, border, and computerized machines and on matching stripes and patterns. Upon completion, students should be able to operate advanced sewing equipment on complex fabrics.
Prerequisites: UPH 121. Corequisites: None. (F,S,SU)

UPH 123   Sewing III   1 4 0 3
This course is designed to provide additional instruction on sewing techniques commonly used for speed and accuracy in incentive work when fabricating welt box cushions. Emphasis is placed on learning to accurately follow sewing diagrams used for creating welted box cushions and similar components common to the furniture upholstery industry. Upon completion, the student should be able to make contrast and self welt box cushions without a zipper or box border machine.
Prerequisites: UPH 121. Corequisites: None.

UPH 131   Seat Construction I   1 4 0 3
This course introduces basic seat construction for simple furniture styles. Topics include webbing, light-weight springs, and basic eight-way tie construction. Upon completion, students should be able to develop basic seat construction for simple furniture.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 132   Seat Construction II   1 4 0 3
This course covers more complex methods of seat construction, including eight-way hand tieing. Emphasis is placed on eight-way hand tie construction on love seats and sofas and other related topics. Upon completion, students should be able to demonstrate proficiency in eight-way hand tieing on complex furniture styles.
Prerequisites: UPH 131. Corequisites: None. (F,S,SU)

UPH 141   Inside Upholstery I   1 4 0 3
This course covers basic aspects of inside upholstering on simple chairs, including correct terminology. Topics include the introduction of padding and upholstering, seat decks, inside backs and arms of chairs, and fitting cushions. Upon completion, students should be able to peel and upholster seat decks, inside arms, inside backs, and arms of chairs and fit cushions for comfort.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 142   Inside Upholstery II   1 4 0 3
This course covers advanced inside upholstering tasks for chairs, love seats, and sofas. Emphasis is placed on channeling and tufting for all styles and types. Upon completion, students should be able to complete inside upholstering of complex styles of furniture.
Prerequisites: UPH 141. Corequisites: None. (F,S,SU)

UPH 151   Outside Upholstery I   1 4 0 3
This course introduces the application of an outside cover to a basic chair. Topics include double covering and proper use of padding on the outside of chairs, love seats, and sofas. Upon completion, students should be able to cover and pad the outside of a chair.
Prerequisites: None. Corequisites: None. (F,S,SU)

UPH 152   Outside Upholstery II   1 4 0 3
This course covers application of outside coverings to frames using more complex fabric and decoration. Emphasis is placed on applying skirts and decorative trim, including matching of stripes. Upon completion, students should be able to demonstrate proficiency in covering furniture outside and applying decorative trim and matching of stripes.
Prerequisites: UPH 151. Corequisites: None. (F,S,SU)

UPH 161   Automated Cutting I   1 2 0 2
This course introduces the basic operating procedures of automated cutting equipment in the upholstery industry. Emphasis is placed on operation of automated cutting equipment. Upon completion, students should be able to maintain and operate the automated cutter with marker for maximum yield.
Prerequisites: UPH 111. Corequisites: None. (On demand)

UPH 162   Automated Cutting II   1 2 0 2
This course covers computer functions as they relate to the operation of the automated cutter. Topics include correcting and positioning of markers on fabric, cutting of multiple layers of fabric, and an overview of software. Upon completion, students should be able to process a set of markers through a complete cutting cycle.
Prerequisites: UPH 161. Corequisites: None. (On demand)

UPH 186   Upholstered Furn Styles   2 0 0 2
This course covers periods and styles of upholstered furniture from Gothic to 21st century. Emphasis is placed on style characteristics and influences on development and design construction. Upon completion, students should be able to identify styles of upholstered furniture from various time periods and demonstrate an understanding of construction as related to styles of furniture.
Prerequisites: None. Corequisites: None. (On demand)

WEB TECHNOLOGIES

WEB 110   Internet/Web Fundamentals   2 2 0 3
This course introduces basic markup language, various navigational tools and services of the Internet. Topics include creating web pages, using Internet protocols, search engines, file compression/decompression, FTP, E-mail, listservers, and other related topics. Upon completion, students should be able to deploy a web-site created with basic markup language, retrieve/decompress files, e-mail, FTP, and utilize other Internet tools.
Prerequisites: None. Corequisites: None. (F)

WEB 111   Intro to Web Graphics   2 2 0 3
This course is the first of two courses covering the creation of web graphics, addressing problems peculiar to WWW display using appropriate software. Topics include web graphics file types, type conversion, RGB color, the browser-safe palette, elementary special effects, image maps, and other related topics. Upon completion, students should be able to create graphics such as banners buttons, backgrounds, and other graphics for Web pages.
Prerequisites: None. Corequisites: None. (On demand)

WEB 115   Web Markup and Scripting   2 2 0 3
This course introduces client-side Internet programming using the current W3C-recommended presentation markup language and supporting elements. Topics include site management and development, markup elements, stylesheets, validation, accessibility, standards, browsers, and basic JavaScripting. Upon completion, students should be able to hand-code web pages with various media elements according to current markup standards and integrate them into websites.
Prerequisites: None. Corequisites: None. (F)

WEB 120   Intro Internet Multimedia   2 2 0 3
This is the first of two courses covering the creation of internet multimedia. Topics include Internet multimedia file types, file type conversion, acquisition of digital audio/video, streaming audio/video and graphics animation plug-in programs and other related topics. Upon completion, students should be able to create Internet multimedia presentations utilizing a variety of methods and applications.
Prerequisites: None. Corequisites: None. (S)

WEB 140   Web Development Tools   2 2 0 3
This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets.
Prerequisites: None. Corequisites: None. (S)

WEB 151   Mobile Application Dev I   2 2 0 3
This course introduces students to programming technologies, design and development related to mobile applications. Topics include accessing device capabilities, industry standards, operating systems, and programming for mobile applications using an OS Software Development Kit (SDK). Upon completion, students should be able to create basic applications for mobile devices.
Prerequisites: None. Corequisites: None.

WEB 180   Active Server Pages   2 2 0 3
This course introduces Active Server Programming. Topics include Jscript, VBScript, HTML forms processing, and the Active Server Object Model. Upon completion, students should be able to create and maintain Active Server applications.
Prerequisites: CIS 115. Corequisites: None. (On demand)

WEB 186   XML Technology   2 2 0 3
This course is designed to introduce students to XML and related internet technologies. Topics include extensible style language (XSL) document object model (DOM), extensible stylesheet language transformation (XSLT), and simple object access protocol (SOAP). Upon completion, students should be able to create a complex XML document.
Prerequisites: CIS 115. Corequisites: None. (On demand)

WEB 210   Web Design   2 2 0 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, students should be able to employ advanced design techniques to create high impact and highly functional web pages.
Prerequisites: None. Corequisites: None. (S)

WEB 220   Advanced Multimedia   2 2 0 3
This is the second of two courses covering Internet multimedia. Topics include use of advanced Internet multimedia applications. Upon completion, students should be able to create interactive Internet multimedia presentations.
Prerequisites: WEB 120. Corequisites: None. (On demand)

WEB 230   Implementing Web Serv   2 2 0 3
This course covers website and web server architecture. Topics include installation, configuration, administration, and security of web servers, services and sites. Upon completion, students should be able to effectively manage the web services deployment lifecycle according to industry standards.
Prerequisites: NET 125. Corequisites: None. (F)

WEB 240   Internet Security   2 2 0 3
This course covers security issues related to Internet services. Topics include the operating system and the Internet service security mechanisms. Upon completion, students should be able to implement security procedures for operating system level and server level alerts.
Prerequisites: WEB 110; CIS 110 **or** CIS 111; SEC 110.
Corequisites: None. (On demand)

WEB 250   Database Driven Websites   2 2 0 3
This course introduces dynamic (database-driven) website development. Topics include the use of basic database CRUD statements (create, read, update and delete) incorporated into web applications, as well as in software architecture principles. Upon completion, students should be able to design and develop database driven web applications according to industry standards.
Prerequisites: DBA 110, WEB 140. Corequisites: None. (F)

WEB 260   E-Commerce Infrastructure   2 2 0 3
This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, documentation, and site administration. Upon completion, students should be able to setup a working e-commerce Internet web site.
Prerequisites: WEB 250. Corequisites: None. (On demand)

WEB 289   Internet Technologies Project   1 4 0 3
This course provides an opportunity to complete a significant Web technologies project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete an Internet project from the definition phase through implementation.
Prerequisites: WEB 250. Corequisites: None. (S)

WELDING

WLD 110   Cutting Processes   1 3 0 2
This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.
Prerequisites: None. Corequisites: None. (F,S)

WLD 112   Basic Welding Processes   1 3 0 2
This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.
Prerequisites: None. Corequisites: None. (F,S)

WLD 115   SMAW (Stick) Plate   2 9 0 5
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.
Prerequisites: None. Corequisites: WLD 110. (F,S)

WLD 115AC SMAW (Stick) Plate-AC   1 3 0 2
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in the flat and horizontal positions with SMAW electrodes. Upon completion, students should be able to perform groove welds on carbon plate with prescribed electrodes.
Prerequisites: None. Corequisites: WLD 110. (F,S)

WLD 115BC SMAW (Stick) Plate-BC   1 3 0 2
This course is a continuation of WLD 115AC, the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in the vertical and overhead positions with SMAW electrodes. Upon completion, students should be able to perform groove welds on carbon plate with prescribed electrodes.
Prerequisites: WLD 110, WLD 115AC. Corequisites: WLD 115AC. (F,S)

WLD 115CC SMAW (Stick) Plate-CC   0 3 0 1
This course is a continuation of WLD 115BC, the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in the vertical and overhead positions with SMAW electrodes. Upon completion, students should be able to perform groove welds on carbon plate with prescribed electrodes.
Prerequisites: WLD 110,WLD 115BC. Corequisites: WLD 115BC. (F,S)

WLD 116   SMAW (Stick) Plate/Pipe   1 9 0 4
This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.
Prerequisites: WLD 115. Corequisites: None. (F,S)

WLD 116AB SMAW (Stick) Plate/Pipe-AB   1 4 0 2
This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, and horizontal positions.
Prerequisites: WLD 115. Corequisites: None. (F,S)

WLD 116BB SMAW (Stick)Plate/Pipe-BB   0 5 0 2
This course is a continuation of WLD 116AB, the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical and overhead positions without backing plates.
Prerequisites: WLD 115, WLD 116AB. Corequisites: WLD 116AB. (F,S)

WLD 121   GMAW (MIG) FCAW/Plate   2 6 0 4
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.
Prerequisites: WLD 115. Corequisites: None. (F,S)

WLD 131   GTAW (TIG) Plate   2 6 0 4
This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.
Prerequisites: WLD 121. Corequisites: None. (F,S)

WLD 141   Symbols & Specifications   2 2 0 3
This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.
Prerequisites: None. Corequisites: None. (On demand)

WLD 143   Welding Metallurgy   1 2 0 2
This course introduces the concepts of welding metallurgy. Emphasis is placed on basic metallurgy, effects of welding on various metals, and metal classification and identification. Upon completion, students should be able to understand basic metallurgy, materials designation, and classification systems used in welding.
Prerequisites: RED 080 **or** appropriate placement test score. Corequisites: None. (On demand)

WLD   215   SMAW (Stick) Pipe   1 9 0 4

This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions.
Prerequisites: WLD 115 **or** WLD 116. Corequisite:None. (F,S)

WLD 215AB SMAW (Stick) Pipe-AB   1 4 0 2

This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in the 2G and 5G positions.
Prerequisites: WLD 115, WLD 116. Corequisites: None. (F)

WLD 215BB SMAW (Stick) Pipe-BB   0 5 0 2

This course is a continuation of WLD 215AB. Topics include pipe positions, joint geometry, and preparation with emphasis on making welds in the 2G and 5G positions without backing, and testing in the 6G position with carbon steel electrodes and making pipe welds with stainless steel electrodes. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with carbon steel electrodes in various positions.
Prerequisites: WLD 115, WLD 116, WLD 215AB.
Corequisites: WLD 215AB. (F,S)

WLD 261   Certification Practices   1 3 0 2

This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.
Prerequisites: WLD 115, WLD 121, WLD 131.
Corequisites: None. (On demand)

WLD 262   Inspection & Testing   2 2 0 3

This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.
Prerequisites: WLD 141. Corequisites: None. (On demand)

BOARD OF TRUSTEES
(2012-2013)

Trustees for Catawba Valley Community College are selected for four-year terms, four each by the Catawba County Board of Commissioners, the Governor of North Carolina, the three Boards of Education in Catawba County, and two by the Alexander County Board of Commissioners. Under state law, the duly-elected President of the CVCC Student Government Association is a non-voting trustee for a term of one year. New appointments occur in July each year and at other times if there are resignations, etc. For a current listing, please contact the Office of the President.

CVCC President

Hinshaw, Garrett D. ....President
B.S., M.A., Appalachian State University; Ed.D., North Carolina State University.
E-mail: ghinshaw@cvcc.edu • Telephone extension: 4210

Williams, Sherry .... Assistant to the President
A.G.E., Catawba Valley Community College.
E-mail: swilliam@cvcc.edu • Telephone extension: 4280

Alphabetical Employee Listing

Abernathy, Jimmy E. .... Turfgrass Management Technology Faculty
A.A.Sc., North Carolina State University; B.S., Gardner-Webb University.
G. and S. Turf Product Training School.
E-mail: jabernat@cvcc.edu • Telephone extension: 4250

Acree, Deborah L. .... Administrative Assistant/
Math, Biology, and Physical Sciences
Catawba Valley Community College.
E-mail: dacree@cvcc.edu • Telephone extension: 4398

Adams, Crystal.......................Dental Hygiene Faculty/Clinical Coordinator
B.S., Mountain State University; A.A.Sc., Central Piedmont Community
College; Diploma, Wilkes Community College.
Email: cadams@cvcc.edu • Telephone extension: 4158

Andersen, James .... Basic Skills Faculty/DOC
A.A., Catawba Valley Community College; B.A., Appalachian State
University; M.A., Appalachian State University.
E-mail: jandersen@cvcc.edu • Telephone number: 828-632-1331

Andrews, Cynthia J... Administrative Assistant/
Safety & Security/Technology Services
A.A.S., Durham Technical Community College.
E-mail: candrews@cvcc.edu • Telephone extension: 4197

Annas, Randy..Maintenance Technician
Telephone extension: 4236

Archer, Jennifer..................................Financial Aid Technician/Student Services
A.A.Sc, Catawba Valley Community Collge.
E-mail: jarcher@cvcc.edu • Telephone extension: 4220

Austin, Debbie ....CVCC Liason ECHS Coordinator/Counselor
B.S., Gardner-Webb University; Certificate, Liberty University.
E-mail: daustin@cvcc.edu • Telephone extension: 4572

Babb, Nena H....................Mathematics Coordinator/Learning Assistance Center
A.A.Sc., Catawba Valley Community College; B.S., North Carolina State
University; M.A., Appalachian State University.
E-mail:nbabb@cvcc.edu • Telephone extension: 4404

Badgley, Paul (Nimon)....................................EMS Faculty/Clinical Coordinator
B.S., Western Carolina University.
E-mail:pbadgley@cvcc.edu • Telephone extension: 4347

Bailey, Seth ....Criminal Justice Faculty/HCAM
B.S., Baldwin Wallace College; M.B.A., Northcentral University.
E-mail: sbailey@cvcc.edu

Baker, Scott ....Admissions Counselor/Student Services
B.S., M.P.A., Appalachian State University.
E-mail: sbaker@cvcc.edu • Telephone extension: 4266

Barger, Debbie .... Director, Scholarships and Financial Aid/Student Services
A.A.Sc., Catawba Valley Community College; B.T., Appalachian State University.
E-mail: dbarger@cvcc.edu • Telephone extension: 4214

Barkley, Dedee...Assistant Controller/Business Office
A.A.Sc., Catawba Valley Community College.
E-mail: dbarkley@cvcc.edu • Telephone extension: 4304

Barkley, Judy.........................Basic Skills Assessment/Retention Specialist
B.A., Lenoir-Rhyne University.
E-mail: jbarkley@cvcc.edu • Telephone extension: 4366

Barnes, Ricky A. .... Networking/Information Technology Faculty
A.A.Sc., Catawba Valley Community College; B.I.T., M.I.T., American
Intercontinental University. Certifications: Cisco Certified Network
Associate; Cisco Certified Academy Instructor.
E-mail: rbarnes@cvcc.edu • Telephone extension: 4312

Barnes-Holden, Carmen... Library Specialist
A.A.Sc., Catawba Valley Community College; B.A., Lenoir-Rhyne
University. Certified Global Career Development Facilitator.
E-mail: cbarnesholden@cvcc.edu • Telephone extension: 4804

Beard, Benita R. ....Associate Degree Nursing Faculty
A.A., Gardner-Webb University; B.S.N., Lenoir-Rhyne University;
M.S.N., University of North Carolina at Greensboro.
E-mail: bbeard@cvcc.edu • Telephone extension: 4336

Bechtol, Amy M. ....Psychology Faculty
B.S., University of Tennessee, Martin; M.A., East Tennessee State
University; M.S., University of Florida.
E-mail: abechtol@cvcc.edu • Telephone extension: 4377

Bedington, Randy S. .... Department Head/ Engineering Technologies
A.A.Sc., Catawba Valley Community College; B.S., North Carolina State
University; M.S., Western Carolina University.
E-mail: rbedington@cvcc.edu • Telephone extension: 4298

Bergman, Brian .... Psychology Faculty
B.A., M.S., PhD., Temple University.
E-mail: bbergman@cvcc.edu • Telephone extension 4720

Biggs, Teresa W...............................Executive Director, CVCC Foundation, Inc.
B.S., M.B.A., Gardner-Webb University.
E-mail: tbiggs@cvcc.edu • Telephone extension: 4288

Bitsche, Catherine A. ....Director Respiratory Therapy Program
B.S., University of Oklahoma; M.A., Ed.S., Appalachian State University.
E-mail: cbitsche@cvcc.edu • Telephone extension: 4391

Black, Carla ....Administrative Clerk/Innovation Center
A.A., Catawba Valley Community College.
Email: cblack@cvcc.edu • Telephone extension: 4306

Blanchard, Susannah..English Faculty
B.A., M.A., University of North Carolina at Wilmington.
E-mail: sblanchard@cvcc.edu • Telephone extension: 4233

Bloomfield, Eleanor ....Associate Degree Nursing Faculty
A.D.N., Miami Dade Community College; B.S.N., University of Miami;
M.S.N., University of North Carolina at Greensboro.
E-mail: ebloomfi@cvcc.edu • Telephone extension: 4335

Boone, Michael A. .... Mathematics Faculty
B.S., Clemson University; M.A., Appalachian State University.
E-mail: mboone@cvcc.edu • Telephone extension: 4537

Bost, Brenda.. HRD Career Start Case Manager
A.A., Wingate University; B.S., Winthrop University.
E-mail: bbost@cvcc.edu • Telephone extension: 4459

Bowes, Lauran ....Spanish Faculty
B.A., University of North Carolina at Asheville; M.A., Appalachian State
University.
E-mail: lbowes@cvcc.edu • Telephone extension: 4702

Brandon, Carolyn D. ....Assistant Director, Scholarships and Financial Aid/
Student Services
A.A.Sc., Catawba Valley Community College. B.S., Gardner-Webb University.
E-mail: cbrandon@cvcc.edu • Telephone extension: 4244

Brannon, Bobbie ....Sociology Faculty
A.A., Glendale Community College; B.S., M.A., Northern Arizona
University.
E-mail: bbrannon@cvcc.edu • Telephone extension: 4628

Braun, Elizabeth...........................Developmental Reading/English Faculty
B.S., Western Illinois; M.S., Augusta State University.
E-mail: ebraun@cvcc.edu • Telephone extension:

Brittain, Carol G.. Bookstore Manager
E-mail: cbrittai@cvcc.edu • Telephone extension: 4415

Brittain, Laura ....Analytical Lab Technician/Mfg. Solutions Center
Catawba Valley Community College.
E-mail: lbrittain@manufacturingsolutionscenter.org • Telephone extension: 4588

Brittain, Ronnie.................................... CIM Faculty/Program Coordinator
Diploma, Catawba Valley Community College. Certifications: National
Institute for Metalworking Skills (NIMS) Machining Level I.
E-mail: rbrittain@cvcc.edu • Telephone extension: 4713

Brittain, Teresa......... Backup System Administrator & Technical Analyst/Data Services
A.A.Sc., Catawba Valley Community College.
E-mail: tbrittain@cvcc.edu • Telephone extension: 4289

Brooks, Tom.................................Computer Technician/Information Technology
Catawba Valley Community College.
E-mail: tbrooks@cvcc.edu • Telephone extension: 4496

Brown, Ashley K. ....Sociology/Political Science Faculty
A.A., Catawba Valley Community College; B.A., Lenoir-Rhyne University;
M.P.A., Appalachian State University.
E-mail: abrown@cvcc.edu • Telephone extension: 4223

Browning, Kim E. ....Department Head/Physical Sciences
B.S., University of Central Florida; Ph.D., University of Florida.
E-mail: kbrowning@cvcc.edu • Telephone extension: 4536

Buchanan, Cathy .... FTE Record/CE Billing Technician/Business Office
Catawba Valley Community College.
E-mail: cbuchanan@cvcc.edu • Telephone extension: 4175

Buchanan, Krysten........................Developmental English/Reading Faculty
B.A., Western Carolina University; M.A. Western Carolina University.
E-mail: kbuchanan@cvcc.edu • Telephone extension: 4691

Buff, Tammy S. ....HRD Faculty/WorkKeys Administrator
/Human Resources Development
B.S., Appalachian State University.
E-mail: tbuff@cvcc.edu • Telephone extension: 4819

Bunch, Wesley G. ....Vice-President of Business Affairs
B.S., East Carolina University; M.A., Appalachian State University; CPA.
E-mail: wbunch@cvcc.edu • Telephone extension: 4271

Burns, Carol ....CNA Coordinator, Health & Human Services
A.D.N., Western Piedmont Community College.
E-mail:cburns@cvcc.edu • Telephone extension: 4230

Butler, Carrie...Secretary/Dental Hygiene
Catawba Valley Community College.
E-mail:cbutler@cvcc.edu • Telephone extension: 4164

Byrd, Juli... Secretary/Receptionis/Personnel Office
A.A.S., Catawba Valley Community College.
Email: jbyrd@cvcc.edu • Telephone extension: 4100

Caldwell, Lanny ....Telecommunications Specialist/Technology Services
A.A.S., Catawba Valley Community College.
E-mail: lcaldwell@cvcc.edu • Telephone extension: 4663

Caldwell, Robin ....Associate Degree Nursing Faculty
B.S.N., Western Carolina University; M.S.N.; University of North Carolina
at Greensboro.
E-mail: rcaldwell@cvcc.edu • Telephone extension: 4299

Camilo, Gilberto ....Physics Faculty
B.A., Sao Carlos University. M.S., PhD., State University of Campinas.
E-mail: gcamilo@cvcc.edu • Telephone extension: 4425

Campbell, Brandy ....Financial Aid Technician/Student Services
A.A.Sc., Catawba Valley Community College.
E-mail: bcampbell@cvcc.edu • Telephone extension: 4450

Canipe, Carla.. Administrative Assistant/
Health Information Technology Workforce Development
A.A.Sc., Catawba Valley Community College.
E-mail: ccanipe@cvcc.edu • Telephone extension: 4810

Canipe, Robert ....English Faculty
A.A., Catawba Valley Community College; B.A., Lenoir-Rhyne
University; M.A., Appalachian State University.
E-mail: rcanipe@cvcc.edu • Telephone extension: 4380

Caudill, Randy .... Department Head/Industrial Technologies
A.A.Sc., Catawba Valley Community College. Certifications: National
Institute for Automotive Service Excellence, Master Automobile Technician.
E-mail: rcaudill@cvcc.edu • Telephone extension: 4561

Chang, Vong........................Computer Technician/IT/ASU Hickory Center
A.A.S., Fresno City College; B.A. Lenoir-Rhyne University.
E-mail: vchang@cvcc.edu • Telephone extension: 4433

Chapman, Robyn F. .... Chief Business Administrator/Business Office
A.A.Sc., Catawba Valley Community College; B.S., Western Carolina University.
E-mail: rchapman@cvcc.edu • Telephone extension: 4273

Chewning, Timothy ....Executive Director/
Health and Public Services Innovation Center
A.A.Sc., Catawba Valley Community College.
E-mail: tchewning@cvcc.edu • Telephone extension: 4331

Childers, Sherry .... Student Records Technician/Student Services
A.A.Sc., A.A., Catawba Valley Community College.
E-mail: schilders@cvcc.edu • Telephone extension: 4407

Chownyk, Ronald J......................Electronics Engineering Technology Faculty
B.S.E.E., Lawrence Institute of Technology.
E-mail: rchownyk@cvcc.edu • Telephone extension: 4748

Clanton, Daniel ....Director of Educational Technology
B.A., Lenoir-Rhyne College; M.S., American Intercontinental University.
E-mail: jdclanton@cvcc.edu • Telephone extension: 4311

Clanton, David R. .... Turfgrass Management Technology Faculty
A.A.S., Catawba Valley Community College; B.S., Clemson University.
E-mail:dclanton@cvcc.edu • Telephone extension: 4670

Clark, Kimberly ....Dean of Health and Public Services
B.S., Wheeling Jesuit College; M.B.A., West Virginia University;
Ed.D., University of North Carolina at Charlotte.
E-mail: kclark@cvcc.edu • Telephone extension: 4686

Clark, Ted... Senior Grounds Keeper/Facility Services
Telephone extension: 4236

Clippard, Karen M. ....Administrative Assistant/
Environmental and Industrial Technologies
A.A.Sc., Catawba Valley Community College.
E-mail: kclippard@cvcc.edu • Telephone extension: 4211

Coates, Sheila M. .... Executive Assistant/
Office of Accountability, Efficiency, and Effectiveness
Certificate, Georgia Institute of Technology.
E-mail: scoates@cvcc.edu • Telephone extension: 4215

Connolly, Joanna M. ....Geology/Geography Faculty
B.S., University of North Carolina at Charlotte; M.S., Texas A& M
University.
E-mail: jconnolly@cvcc.edu • Telephone extension: 4534

Cook, Debra W...................... Director, Health Information Technology Program
B.S., M.A., Ed., East Carolina University.
E-mail: dcook@cvcc.edu • Telephone extension: 4342

Connor, Daniel ....Computer Technician/Computer Programming
A.A.Sc., Catawba Valley Community College.
E-mail: dconner@cvcc.edu • Telephone extension: 4465

Coulter, Cynthia L. ....Executive Officer/Student Services
B.S., M.Ed., University of North Carolina at Greensboro.
E-Mail: ccoulter@cvcc.edu • Telephone extension: 4143

Cox, Sharon... Administrative Clerk/ACE
Business Administration, Southwest Virginia Community College.
E-mail: scox@cvcc.edu • Telephone extension: (828)632-8221, ext. 310

Cranford, Aden W. .... Early Childhood Education Faculty
B.A., M.S., University of Tennessee.
E-mail: acranford@cvcc.edu • Telephone extension: 4575

Crosby, W. Scott..Horticulture Technology Faculty
B.S., Clemson University; M.Ag.Ed., Clemson University. Public and Pri-
vate Pesticide Applicator: N.C. Department of Agriculture, Designware and
Planscape Training School; NC Certified Landscape Contractor Instructor;
ICPI National Certification in Paver Design and Installation; NC Registered
Landscape Contractor; Licensed N.C. Irrigation Contractor; Certified Retain-
ing Wall Installation-CSRWI.
E-mail: scrosby@cvcc.edu • Telephone extension: 4290

Crouse, Amanda B. ....Software Support/Database Technician/Data Services
B.A., Lenoir-Rhyne University.
E-mail: acrouse@cvcc.edu • Telephone extension: 4365

Crump, Kathy.. General Business/Economics Faculty
B.A., Lenoir-Rhyne University; M.E., North Carolina State University.
E-mail: kcrump@cvcc.edu • Telephone extension: 4368

Curry, Maria............................ Antimicrobial Testing/ Mfg. Solutions Center
B.S., Bergische Universitaet, Wuppertal, Germany.
E-mail: mcurry@manufacturingsolutionscenter.org • Telephone extension: 4521

Cusick, Sandra .... Cashier/Accounts Receivable Technician/Business Office
A.A.Sc., Catawba Valley Community College.
E-mail-scusick@cvcc.edu • Telephone extension: 4367

Davis, Donna........................ Administrative Clerk/Health & Human Services
Diploma, Kings College.
E-mail: ddavis@cvcc.edu • Telephone extension: 4319

Deal, Ricky .... Furniture Upholstery Faculty/DOC
Eight years experience in the furniture industry.

deBlois, Erryn .... Bookstore Technician
A.A.Sc., Catawba Valley Community College; B.S., Gardner-Webb University.
E-mail: edeblois@cvcc.edu • Telephone extension: 4435

DeBoever, Ann.. Department Head/Mathematics
B.S., M.Ed., Campbell University.
E-mail: adeboever@cvcc.edu • Telephone extension: 4455

DeLee, Brenda .... Department Head/Business Technologies
B.S., Limestone College; M.A., Webster University.
E-mail: bdelee@cvcc.edu • Telephone extension: 4673

Dellinger, Marty ....Educational Technology Specialist
    A.S., South Florida Junior College; B.S.B.A., University of South Carolina;
    Ed.S., M.S.A., Appalachian State University.
    E-mail: mdellinger@cvcc.edu • Telephone extension: 4458

Duffey, William (Bill) ....Library Specialist
    A.A.Sc., Catawba Valley Community College.; B.A., Western Illinois University.
    E-mail: bduffey@cvcc.edu • Telephone extension: 4253

Dulin, William J. ....Vice-President Enrollment Support Services
    B.S., University of North Carolina at Chapel Hill; M.S., Appalachian State
    University.
    E-mail: bdulin@cvcc.edu • Telephone extension: 4219

Eller, Richard E. ....Department Head/Social Sciences
    A.A., Caldwell Community College; B.A., Lenoir-Rhyne University;
    M. A., University of North Carolina at Charlotte.
    E-mail: reller@cvcc.edu • Telephone extension: 4620

Eller, Ted ....Telecommunications Technician
    A.A., Catawba Valley Community College; B.S., Appalachian State University.
    E-mail: teller@cvcc.edu • Telephone extension: 4006

Ellington, Kim...Pottery Faculty
    E-mail: kellington@cvcc.edu • Telephone number: (704) 462-0077

Elliott, Ken.....................................Executive Officer/Technology Services
    B.A., University of North Carolina at Chapel Hill; M.A., Appalachian
    State University; Ph.D., Capella University.
    E-mail: kelliott@cvcc.edu • Telephone extension: 4249

Elliott, Marvin L. ....Communications/Religion Faculty
    B.A., Milligan College; M.A., Kentucky Christian University;
    Ed.S., Appalachian State University; Ed.D., Western Carolina University.
    E-mail: melliott@cvcc.edu • Telephone extension: 4373

Enamait, John D. .... Dean of Business, Industry, and Technology
    A.A.S., Caldwell Community College and Technical Institute; B.S., MBA,
    Gardner-Webb University; Ph.D., Indiana State University.
    E-mail: jenamait@cvcc.edu • Telephone extension: 4322

England, Tisha.............Learning Skills Specialist/Learning Assistance Center
    B.A., Univesity of South Carolina at Aiken.
    E-mail: tengland@cvcc.edu • Telephone extension: 4562

Estes, Joyce .... Associate Degree Nursing Faculty
    B.S.N., University of North Carolina - Charlotte; M.S.N., University of Phoenix.
    Email: jestes@cvcc.edu • Telephone extension: 4338

Ester, Terry ....HVAC Mechanic/Facility Services
    Telephone extension: 4626

Farmer, Caroline M. ....Director of Health Services Admissions
    B.A., East Carolina University. M.L.S., Appalachian State University.
    E-mail: cfarmer@cvcc.edu • Telephone extension: 4218

Farris, Leslie ....HRD Faculty
    A.A.Sc., Caldwell Community College and Technical Institute;
    B.S., Gardner Webb University.
    Email: lfarris@cvcc.edu • Telephone extension: 4427

Ferard, Joe.................................. Maintenance Technician/Facility Services
    Telephone extension: 4236

Fletcher, Ramona ....Department Head/English
    B.A., Emory and Henry College; M.S., Ph.D., University of Tennessee
    at Knoxville.
    E-mail: rfletcher@cvcc.edu • Telephone exension: 4039

Flowers, Judy .... Associate Degree Nursing Faculty
    B.S.N., Western Carolina University; M.Ed., Appalachian State University;
    M.S.N., University of North Carolina at Charlotte. Certification in
    Gerontology from the American Nursing Association-Board Certified.
    E-mail: jflowers@cvcc.edu • Telephone extension: 4340

Ford, Kim................................ Healthcare Mgt/Medical Office Adm Faculty
    A.A.S., Gaston College.
    E-mail: kford@cvcc.edu • Telephone extension: 4267

Foss, Thomas C.. CyberCrime Faculty/
    Director, Center for Information Assurance
    B.S. University of Maryland; M.P.A., American University. Thirty years
    experience in IT governance and security.
    E-mail: tfoss@cvcc.edu • Telephone extension: 4794

Fountain, Shawn .... Director of Information Technology Services
    B.A., Lenoir-Rhyne University; M.A., Ed.S.L.S., Appalachian State Uni-
    versity. Appalachian State University; Microsoft IT Academy.
    E-mail: sfountai@cvcc.edu • Telephone extension: 4463

Franklin, Rebecca .... Tutor Coordinator/Learning Assistance Center
    B.S., Catawba College; B.A., Lenoir-Rhyne University.
    E-mail: rfranklin@cvcc.edu • Telephone extension: 4432

Fredell, Anna................................ Financial Aid Technician/Student Services
    A.A.Sc., Catawba Valley Community College.
    E-mail: afredell@cvcc.edu • Telephone extension: 4546

Fredell, Tina W. ....Administrative Assistant/Basic Skills
    A.A.Sc., Catawba Valley Community College.
    E-mail: tfredell@cvcc.edu • Telephone extension: 4353

Freeman, Arlene....................................CVCC East Campus Office Manager
    A.A.Sc., Catawba Valley Community College; A.A.Sc., Western
    Piedmont Community College.
    E-mail: afreeman@cvcc.edu • Telephone extension: 4150

Frye, Chris...........................Computer Technician/Information Technology
    A.A.Sc., Catawba Valley Community College. Certifications: A+.
    E-mail: cfrye@cvcc.edu • Telephone extension: 4399

Gantt, Penny... Facility Services Technician
    Telephone extension: 4236

Garmoth, Bryan...............................Admissions Representative/Student Services
    B.S., University of West Alabama at Livingston; M.Ed., Arkansas Technical
    University at Russeville.
    Email: bgarmoth@cvcc.edu • Telephone extension:

Garrison, Louise M. .... Executive Director,
    Learning and Personal Enrichment Innovation Center
    A.A.Sc., Sandhills Community College; B.T., M.A., Appalachian State University.
    E-mail: lgarrison@cvcc.edu • Telephone extension: 4326

Geis, Jodi B. ....Testing Lab Manager/Mfg. Solutions Center
    B.S., North Carolina State University.
    E-mail: jlynch@manufacturingsolutionscenter.org • Telephone extension: 4115

Gibbs, Elen.......................... Veterans Affairs Coordinator/Student Services
    Asheville-Buncombe Technical Community College; University of
    North Carolina at Asheville.
    E-mail: egibbs@cvcc.edu • Telephone extension: 4260

Gilbert, Donna T. ....Student Services Specialist/
    HIT Workforce Development Program
    B.A., B.S., University of North Carolina at Charlotte.
    E-mail: dgilbert@cvcc.edu • Telephone extension: 4816

Glenn, Crystal L. ....Executive Director Business & Industry/
    Workforce Development Innovation Center
    B.S., North Carolina State University. Certified Six Sigma Green Belt.
    E-mail: cglenn@cvcc.edu • Telephone extension: 4293

Glenn, James T. (Bo) .... Director of Student Activities/
    Student and Community Engagement
    B.S., Gardner-Webb University; M.Ed., University of North Carolina at
    Greensboro.
    E-mail: bglenn@cvcc.edu • Telephone extension: 4388

Gomez, Jacqueline ....Cashier/Accounts Receivable Technician/
    East Campus Business Office
    A.A.Sc., Catawba Valley Community College.
    E-mail: jgomez@cvcc.edu • Telephone extension: 4393

Graham, Clinton...Basic Skills Faculty/DOC
    B.A., Livingstone College.
    E-mail: cgraham@cvcc.edu • Telephone extension:

Graham, Linda .... Executive Director/Alexander Center for Education
    B.S., East Carolina University; M.Ed., University of North Carolina at
    Chapel Hill.
    E-mail: lgraham@cvcc.edu • Telephone number: (828) 632-8221, ext. 302

Gregory, Kay H. ....Dean of Academics, Education, and Fine Arts
    B.A., Mars Hill College; M.A., East Tennessee State University.
    E-mail: kgregory@cvcc.edu • Telephone extension: 4107

Griffin, Seth M. .... Admissions Representative/Recruiter/Student Services
    B.S., M.A., Appalachian State University; M.Ed., Western Carolina
    University.
    E-mail:sgriffin@cvcc.edu • Telephone extension: 4688

Grogan-Campbell, Kristena D.,... Coordinator, Curriculum Schedule Development
    Curriculum & Facilities Management
    A.A.Sc., Caldwell Community College and Technical Institute; B.S., East
    Tennessee State University.
    E-mail: kcampbel@cvcc.edu • Telephone extension: 4131

Hall, Tracy.........Director, Business, Government and Educational Outreach/ Education Matters/Student and Community Engagement
B.A., California State University at Chico.
E-mail: thall@cvcc.edu • Telephone extension: 4851

Ham, Cindy...........................Student Records Technician/Student Services
A.A.Sc., Catawba Valley Community College.
E-mail: cham@cvcc.edu • Telephone extension: 4251

Harris, B. J. ....Administrative Assistant/Dean's of Instruction
Catawba Valley Community College. CPS Certification.
E-mail: bj.harris@cvcc.edu • Telephone extension: 4227

Harris, Gary........................... Director Business and Industry Learning Services/ Workforce Development Innovation Center
A.A., A.S., A.A.Sc., Western Piedmont Community College. B.S., Appalachian State University.
E-mail: gharris@cvcc.edu • Telephone extension: 4297

Harrison, Carol P. ....Director Surgical Technology
R.N., A.A.S., Belleville Area College; 42 years Operating Room Nurse; Staff Nurse, OR Scheduling; Surgical Technology Clinical Instructor, OR Education.
E-mail: charrison@cvcc.edu • Telephone extension: 4332

Hartsoe, Erin...Accounting Assistant/Business Office
B.A., University of North Carolina at Charlotte.
E-mail: ehartsoe@cvcc.edu • Telephone extension: 4679

Heafner, Paul J. ....Astronomy and Physics Faculty
B.A., University of North Carolina at Chapel Hill; M.S., University of North Carolina at Greensboro.
E-mail: jheafner@cvcc.edu • Telephone extension: 4246

Hedrick, Randy G. ....Welding Technology Faculty
Certificate, Catawba Valley Community College. Certifications: American Welding Society Member.
E-mail: rhedrick@cvcc.edu • Telephone extension: 4358

Hefner, Deborah........Administrativie Assistant/Fine & Applied Arts Department
A.A.Sc., Catawba Valley Community College.
E-mail: dhefner@cvcc.edu • Telephone extension: 4468

Hefner, Kim O. ....Administrative Support/ASU Hickory Center
A.A.S., Catawba Valley Community College.
E-mail: khefner@cvcc.edu • Telephone extension: 4424

Henderson, Brandi ....Analytical Lab Technician/Mfg. Solutions Center
A.F.A., Gaston Community College.
E-mail: bhenderson@manufacturingsolutionscenter.org • Telephone ext: 4504

Hendrix, Doreen R ....Graphic Designer/Community Relations
A.A.Sc., Catawba Valley Community College.
E-mail: dhendrix@cvcc.edu • Telephone extension: 4258

Herman, Sherry ....Department Head/Criminal Justice
Certified Criminal and Intelligence Analysis. A.A.Sc., Western Piedmont Community College; B.S., Lees-McRae College; M.C.J., Boston University.
E-mail: sherman@cvcc.edu • Telephone extension: 4050

Hodge, Melinda.. Secretary/Office of the President
A.A.S., Wingate University.
E-mail: mhodge@cvcc.edu • Telephone extension: 4283

Hoke, Peggy...........................Student Records Technician/Student Services
E-mail: phoke@cvcc.edu • Telephone extension: 4217

Holland, Rusty ....Maintenance Mechanic HVAC/Facility Services
Diploma, Catawba Valley Community College.
Telephone extension: 4236

Hollar, Kathryn B. ....Director, Advising Center/Student Services
B.S., University of North Carolina at Charlotte; M.A., Gardner-Webb University.
E-mail: khollar@cvcc.edu • Telephone extension: 4483

Hollar, Paula ....Director, Student Records/Student Services
A.A.Sc., Catawba Valley Community College; B.S., Gardner-Webb University.
E-mail: phollar@cvcc.edu • Telephone extension: 4360

Holleman, Terry .... Computer Information Technology Faculty
A.A.S., Mitchell Community College; B.S.B.A., University of North Carolina at Charlotte; M.B.A., Appalachian State University.
Email: tholleman@cvcc.edu • Telephone 4316

Horvath, Wanda M. ....Counselor/Students with Disabilities Program and Special Programs/Student Services
B.A., M.Ed., Western Carolina University.
E-mail: whorvath@cvcc.edu • Telephone extension: 4222

Hudson, Darlene .... Basic Skills Senior Faculty Coordinator
B.S., Mars Hill College.
E-mail: dhudson@cvcc.edu • Telephone extension: 4268

Hulley, Christine ....Facilities Specialist/ Curriculum & Facilities Management
A.A.S., Northern Virginia Community College.
E-mail: chulley@cvcc.edu • Telephone extension 4689

Hunt, Priscilla .... Support Staff/Student Services
A.A.Sc., Catawba Valley Community College.
Email: phunt@cvcc.edu • Telephone extension: 4216

Hunt, Steve......................Executive Director, Office of Multicultural Affairs
A.A.Sc., Western Piedmont Community College; B.S., Lees-McRae College. Thirty years experience in the criminal justice field.
E-mail: shunt@cvcc.edu • Telephone extension: 4570

Hutchens, Kris ....Information Services Data Specialist/Data Services
A.A.S., Catawba Valley Community College.
E-mail: kriley@cvcc.edu • Telephone extension: 4563

Ingle, Alexandra .... Early Childhood Education Faculty
B.S., Western Carolina University; M.A. Lenoir Rhyne University.
E-mail: aingle@cvcc.edu • Telephone extension: 4515

Irvin, Roger M. . ... Personnel Specialist/Personnel Office
B.A., Thiel College.
E-mail:rirvin@cvcc.edu • Telephone extension: 4103

Isenhour, Faye...................................... Payroll Coordinator/Business Office
A.A.Sc., Catawba Valley Community College.
E-mail: fisenhour@cvcc.edu • Telephone extension: 4270

Isenhour, Tina .... Director of Academic Services
B.S., Gardner-Webb University.
E-mail: tisenhour@cvcc.edu • Telephone extension: 4386

Jackson, Jeffrey.. Basic Skills Faculty/DOC
B.S., Gardner-Webb University, M.S., Mountain State University. Thirty-three years experience in the criminal justice field.
E-mail: jjackson@cvcc.edu • Telephone number 828-632-1331

James, R. Bruce.. Director Radiography Program
A.S., Medical College of Virginia; B.S., M.Ed., Virginia Commonwealth University.
E-mail: bjames@cvcc.edu • Telephone extension: 4132

Jarrett, Eric D. ....Director Electroneurodiagnostic Program
B.S., Wofford College.
E-mail: ejarrett@cvcc.edu • Telephone extension: 4514

Jeffries, Tracie.. Biology Faculty
A.S., Western Piedmont Community College; B.S., M.S., North Carolina State University.
E-mail: tjeffries@cvcc.edu • Telephone extension: 4540

Jenkins, Todd M. ....Horticulture Technology Faculty
A.A.Sc., Catawba Valley Community College. Jacobsen Product Training School, G. and S. Turf Equipment Product Training School, Licensed Public Pesticide Applicator: N.C. Department of Agriculture.
E-mail: tjenkins@cvcc.edu • Telephone extension: 4290

Jernigan, Rebecca A. ....Administrative Assistant, Social Sciences/ Health/Physical Education/Early Childhood Education
B.S., Auburn University.
E-mail: rjernigan@cvcc.edu • Telephone extesion: 4624

Jimison, Sharon.. Associate Degree Nursing Faculty/ Diabetes Education Center Coordinator
M.S.N., Gardner-Webb Uiversity; M.B.A., Winthrop University; Ed.S., Appalachian State University.
Email: sjimison@cvcc.edu • Telephone extension: 4341
Diabetes Education Center 828-322-1854

Johnson, Rita............................... Cashier/Accounts/Receivable/Business Office
A.A.Sc., Caldwell Community College and Technical Institute.
Email: rjohnson@cvcc.edu [a] Telephone extension: 4276

Johnson, Ryan ....English Faculty
B.S., M.A., East Carolina University.
E-mail: rjohnson@cvcc.edu • Telephone extension: 4710

Jones, Rashelle..Advertising/Graphic Design Faculty
Catawba Valley Community College. Ten years Industry Experience in Art Direction and Marketing.
E-mail: rjones@cvcc.edu • Telephone extension:

Kale, Susan J. .... Biology Faculty
B.S., M.A., Appalachian State University.
E-mail: skale@cvcc.edu • Telephone extension: 4235

Kelley, Kimberly .... Financial Aid Technician/Student Services
A.A.Sc., Catawba Valley Community College.
E-mail: kkelley@cvcc.edu • Telephone extension: 4693

Kerley, Vicky C. .... Administrative Assistant/School of Health & Public Services
A.A.Sc., Catawba Valley Community College.
E-mail: vkerley@cvcc.edu • Telephone extension: 4350

Khang, May.................................. Admissions Counselor/Student Services
B.A., M.A., Lenoir-Rhyne University.
E-mail: mkhang@cvcc.edu • Telephone extension: 4221

Kidd, Mike ....Director of Human Resources/Personnel Office
B.S.; University of Tennessee.
E-mail: mkidd@cvcc.edu • Telephone extension: 4278

Killian, Susan.......................................Director, Business/Technology Training/
Workforce Development Innovation Center
A.A.Sc., Catawba Valley Community College; B.A., Lenoir-Rhyne University.
E-mail: skillian@cvcc.edu • Telephone extension: 4330

King, Sonya (Angela) ....Administrative Assistant/ASU Hickory Center
A.A.S., Catawba Valley Community College.
E-mail: aking@cvcc.edu • Telephone extension: 4409

Kirby, Michael D. ....Music Faculty
B.M., Oklahoma Baptist Univeristy; M.A., Appalachian State University.
E-mail: mkirby@cvcc.edu • Telephone extension: 4305

Kiser, Darrell C. ....Department Head/Environmental &
Vocational Programs
B.S., M.Ed., N.C. State University; Ed.S., Nova University. Licensed Agricultural Education Teacher: N.C. Department of Public Instruction. Licensed Public, Private Pesticide Applicator and Consultant: N.C. Department of Agriculture; Registered N.C. Landscape Contractor; Certified SRW Installer; N.C. Certified Landscape Contractor Instructor; Licensed N.C. Irrigation Contractor; Certified Plant Professional.
E-mail: dkiser@cvcc.edu • Telephone extension: 4238

Kokos, Jon..Controller/Business Office
B.S.B.A., Robert Morris University; M.B.A., Point Park University.
E-mail:jkokos@cvcc.edu • Telephone extension: 4508

Kripner, George............................ Senior Strategic Advisor to the President
B.S., Johns Hopkins University; J.D., University of Baltimore School of Law
Email: gkripner@cvcc.edu • Telephone extension: 4820

Lail, Janet W.....................................Administrative Clerk, Business/Technology
Workforce Developoment Innovation Center
Catawba Valley Community College.
E-mail:jwlail@cvcc.edu • Telephone extension: 4116

Lail, Jody D. ....Air Conditioning, Heating &
Refrigeration Technology Faculty
Diploma, Gaston College; Licensed Heating Contractor (H-1-2-3-1); Licensed Electrical Contractor(SP-PH); CFC Certified; R-410A Certified.
E-mail: jlail@cvcc.edu • Telephone extension: 4237

Lail, Jonathan......................................Graphic Design Faculty/HCAM
B.A., Chowan University.
Email: jflail@cvcc.edu • Telephone number: 828-328-6738

Land, Christy... Accounting Faculty
A.A.Sc., Western Piedmont Community College; B.S., M.A., Gardner-Webb University.
E:mail: cland@cvcc.edu • Telephone extension: 4308

Lane, Jean ....Coordinator of Cooperative Education
A.A.Sc., A.G.E., A.A., Catawba Valley Community College; B.S., Western Carolina University.
E-mail: jlane@cvcc.edu • Telephone extension: 4812

Lee, Tim .... Spanish Faculty
B.A., Gardner-Webb University; M.A., Appalachian State University.
E-mail: tlee@cvcc.edu • Telephone extension: 4482

Lefevers, Deborah C. ....Dental Hygiene Faculty
B.S., Medical College of Georgia; M.A., Webster University.
E-mail: dlefever@cvcc.edu • Telephone extension: 4157

LeGrand, Erin .... Institutional Research/QEP Director
B.A., University of North Carolina at Chapel Hill; M.P.A., North Carolina State University.
Email: elegrand@cvcc.edu • Telephone extension: 4427

Lehmons, Richard .... Printing Technician/Academic Services
A.A.Sc., Catawba Valley Community College. Thirty years experience in the printing industry.
E-mail: rlehmons@cvcc.edu • Telephone extension: 4446

Lewis, Brenda B. ....Developmental Math Coordinator/Mathematics Faculty
B.S., M.S., North Georgia College and State University.
E-mail:blewis@cvcc.edu • Telephone extension: 4121

Little, Dianne .... Director, Phillips Leadership Institute
B.S., Ed.S., Appalachian State University; M.A.T., University of North Carolina at Chapel Hill; Ed.D., University of North Carolina at Charlotte.
E-mail: dlittle@cvcc.edu • Telephone extension: 4411.

Lor, Bai .... Web Development/Mfg.Solutions Center
B.A., Lenoir-Rhyne University.
E-mail: lblor@manufacturingsolutionscenter.org • Telephone extension: 4485

Loss, Jonathan E. .... Mathematics Faculty
B.S., Montreat College; M.A., Appalachian State University.
E-mail:jloss@cvcc.edu • Telephone extension: 4526

Lutz, Linda A. ....Executive Director, Student & Community Engagement
B.A., Meredith College; M.Ed., Ed.S., Appalachian State University; Ed.D., Nova Southeastern University.
E-mail: llutz@cvcc.edu • Telephone extension: 4130

Ly, Cindy.................................Lab Technician/Learning Assistance Center
A.A.S., Catawba Valley Community College.
E-mail: cly@cvcc.edu • Telephone extension: 4381

Lynch, S. Shane............................Fiber Analysis Manager/Mfg. Solutions Center
B.S., North Carolina State University.
E E-mail: slynch@manufacturingsolutionscenter.org • Telephone extension: 4146

Mackie, Keith..Vice President of Instruction
B.F.A., Western Carolina University; M.A., Appalachian State University; Ed.D., North Carolina State University.
E-mail: kmackie@cvcc.edu • Telephone extension: 4161

Mann, Kenneth .... Mathematics Faculty
B.S., M.S., Old Dominion University.
E-mail: kmann@cvcc.edu • Telephone extension: 4495

Marhao, Vasilica .... Mathematics Faculty
M.S., University of Babesh-Bolyai, Cluj-Napoca, Romania; M.A., Ashland Theological Seminary, Division of Ashland University.
E-mail: vmarhao@cvcc.edu • Telephone extension: 4529

Marler, Norma Cole ....Information Systems Faculty
B.S., Western Carolina University; M.A. Appalachian State University.
E-mail: nmarler@cvcc.edu • Telephone extension: 4248

Marlow, Kristi .... GED Coordinator
B.S., Appalachian State University.
E-mail: kmarlow@cvcc.edu • Telephone extension: 4129

Martin, Cynthia L. ....Bookstore Technician
E-mail:cmartin@cvcc.edu • Telephone extension: 4466

Martin, Jane M. ....Hiring and Benefits Coordinator/Personnel Office
B.S., Gardner-Webb University.
E-mail: jmartin@cvcc.edu • Telephone extension: 4277

Martin, LuAnn G. ....Lead Simulation Coordinator/Health Services
R.N., C.N.E., A.D.N., Rhodes State College; B.S.N., Winston-Salem State University; M.S.N., University of North Carolina at Greensboro; Ed.S., Appalachian State University.
E-mail: lmartin@cvcc.edu • Telephone extension: 4224

Maxie, Selena C. .... Administrative Assistant/
Business & Business Technology Department
A.A.Sc., Catawba Valley Community College.
E-mail: smaxie@cvcc.edu • Telephone extension: 4307

Maxwell, Alfred ....Computer Techician/Information Technology
A.A.Sc., Catawba Valley Community College.
E-mail: amaxwell@cvcc.edu • Telephone extension:

McCann, Jill L. ....Microscopy Testing/Mfg. Solutions Center
A.A.Sc., Catawba Valley Community College. Twenty years in the textile industry.
E-mail: jmccann@manufacturingsolutionscenter.org • Telephone extension: 4520

McCray, Connie .... Testing Technician/Student Services
A.A.Sc., Mitchell Community College.
E-mail: cmccray@cvcc.edu • Telephone extension:

McDaniel, Linda ....Director of Information Services
B.T., Appalachian State University.
E-mail: lmcdaniel@cvcc.edu • Telephone extension: 4272

McGinnis, Jeanne.. Mathematics Faculty
B.A., Davidson College; M.H.A., Medical College of Virginia.
E-mail: jmcginnis@cvcc.edu • Telephone extension: 4528

McKesson, Gearldine "Jerri" ....Analytical Lab Technician/Mfg. Solutions Center
E-mail: gmckesson@manufacturingsolutionscenter.org • Telephone extension: 4519

McNally, B. J. .... Secretary/Receptionist/Humanities Department
Caldwell Community College and Technical Institute.
E-mail: bmcnally@cvcc.edu • Telephone extension:4164

Melton, Brice ....Director, Early Childhood Education/
Health & Physical Education
B.A., Meredith Collge; M.A., Lenoir-Rhyne University.
E-mail: bmelton@cvcc.edu • Telephone extension: 4128

Messick, Terry..History Faculty
B.A., Lenoir-Rhyne University; M.A., University of North Carolina at Charlotte.
E-mail: tmessick@cvcc.edu • Telephone extension: 4493

Middleton, Kevin L................................ Human Resources Development Faculty
A.A.S., Catawba Valley Community College; B.S., Gardner-Webb University.
Email: kmiddleton@cvcc.edu • Telephone extension: 4683

Mifsud, Tony ....Director of Business Development
B.B.A., University of Detroit; M.B.A., Baldwin Wallace College; D.B.A.,
Northcentral University. Thirty years experience in operating and financial
management.
E-mail: tmifsud@cvcc.edu • Telephone extension: 4309

Miller, Don ....Director, The Tarlton Complex
B.A., Lenoir-Rhyne University; M.A., Appalachian State University.
E-mail: dmiller@cvcc.edu • Telephone extension: 4426

Miller, Curt............................. HRD Faculty/Workforce Development Grant
B.S., Appalachian State University.
E-mail: cmiller@cvcc.edu • Telephone extension:

Miller, Jessica..Mathematics Faculty
B.S., North Carolina State University; M.A., Appalachian State University.
E-mail: jmiller@cvcc.edu • Telephone extension: 4539

Miller, Michael H. ....Furniture Technology Faculty/DOC
Twelve years experience in the furniture industry.

Mitchell, Lamar......Director, Business, Government and Non-Profit Outreach
Champions of Education/Student and Community Engagement
B.A., University of North Carolina at Chapel Hill.
E-mail: lmitchell@cvcc.edu • Telephone extension: 4709

Mitchell, Michael....................................Furniture Technology Faculty/DOC
20 Years Furniture/Sewing Experience.

Moody, Mitzi...........................Accounts Payable Technician/Business Office
Certification, Bristol Commercial College.
E-mail: mmoody@cvcc.edu • Telephone extension: 4337

Moore, Alvin.. Chemistry Faculty
B.S. Rhodes College; Ph.D., University of North Carolina at Chapel Hill.
E-mail: amoore@cvcc.edu • Telephone extension: 4245

Moore, Jeffrey H. .... Athletic Director/
Health and Physical Education Faculty
A.A., American River College; B.A., M.A., California State University at
Sacramento. Certified American Red Cross Instructor.
E-mail:jmoore@cvcc.edu • Telephone extension: 4625

Morello, Chanell ....Director of Basic Skills Education
B.A., New York University; M.S., Barry University.
E-mail: cmorello@cvcc.edu • Telephone extension: 4352

Morganti, Margo .... HIT Grant Faculty
A.A.Sc., Catawba Valley Community College.
E-mail: mmorganti@cvcc.edu • Telephone extension:

Morris, Brian.. Department Head/Fine and Applied Arts
Diploma, Catawba Valley Community College; A.A., Chowan College; B.A.,
University of North Carolina at Greensboro; M.A.Ed., Ed.D., Western Carolina
University. Twenty years experience in the printing industry.
E-mail: bmorris@cvcc.edu • Telephone extension: 4383

Mull, Shawn...Automotive Technologies Faculty
A.A.Sc., Gaston College. Certifications: National Institute for Automotive
Service Excellence, Master Automobile Technician.
E-mail: smull@cvcc.edu • Telephone extension: 4234

Muller, Gary ....Department Head/Business Programs
B.A., M.B.A., Wake Forest University; CPA. Member of AICPA and NCACPA,
NACCE Fellow.
 Email: gmuller@cvcc.edu • Telephone extension: 4672

Muller, Tammy..Department Head/Cosmetology
Diploma, Cosmetic Arts Academy; B.S., Mountain State University.
Certifications, Human Resources Management, and Entrepreneurship.
Email:tmuller@cvcc.edu • Telephone extension: 4108

Neal, Arlene S. ....Department Head/Developmental English & Reading
B.S., M.A., Applachian State University.
E-mail: aneal@cvcc.edu • Telephone extension: 4417

Neal, Renee .... New Choices Program Coordinator/Student Services
B.S.W., University of North Carolina at Greensboro.
E-mail: rneal@cvcc.edu • Telephone extension: 4408

Neaves, David ....Computer Engineering Technology Faculty
Certificate, Catawba Valley Community College; B.S., Appalachian State
University. Certified Electronics Technician.
E-mail: dneaves@cvcc.edu • Telephone extension: 4749

Nelson, David L. ....Mechanical Engineering Technology Faculty
B.S.M.E, Auburn University; M.S.M.E., University of Vermont.
E-mail: dnelson@cvcc.edu • Telephone extension: 4749

Neuville, Jeffrey L. ....Director, Small Business Center
B.S., University of North Carolina - Chapel Hill; M.S., University of Maryland
E-mail: jneuville@cvcc.edu • Telephone extension: 4102

Page, Jessica G. ....Director, Curriculum & FacilitiesManagement
A.A.S., Catawba Valley Community College.
E-mail: jpage@cvcc.edu • Telephone extension: 4362

Pait, Frank ....Counselor/Recruiter/Men'sBaseball Coach/Student Services
B.S., Wingate University; M.A., Lenoir-Rhyne University.
E-mail:fpait@cvcc.edu • Telephone extension: 4119

Parker, Latrice W. .... Software Technician/Information Technology
A.A.Sc., Catawba Valley Community College.
E-mail:lparker@cvcc.edu • Telephone extension: 4363

Peeler, Tim ....Director, Learning Assistance Center/
English Coordinator
B.A., East Carolina University; M.A., Appalachian State University; Develop-
mental Education Specialist, Appalachian State University.
E-mail: tpeeler@cvcc.edu • Telephone extension: 4382

Pendleton, Jeffrey..Groundskeeper/Facility Services
Telephone extension: 4236

Penley, Jeff ....Business Law Faculty
A.B., J.D., University of North Carolina at Chapel Hill. Member, the North
Carolina State Bar. Enactus Fellow. Editor/Author, McGraw-Hill Business Law
Newsletter.
E-mail: jpenley@cvcc.edu • Telephone extension: 4310

Perry, Amanda..Cosmetology Faculty
A.A.s., Ashworth Community College.
E-mail: aperry@cvcc.edu • Telephone extension: 4113

Petersen, Betty .... Biology Faculty
B.S., North Carolina State University; M.S., North Carolina Central University.
E-mail: bpetersen@cvcc.edu • Telephone extension: 4441

Peterson, Brian.. Biology Faculty
B.S., M.S., Missouri State University.
Email: bpeterson@cvcc.edu • Telephone extension:4148

Phelps, Nathan ....Photographic Technology Faculty/HCAM
A.A.Sc., B.S., Collins College.
E-mail:nphelps@cvcc.edu • Telephone number: 828-328-6738

Pinckney, Glenn .... Assitant Director, Office of Multiculture Affairs
B.A., RHEMA Bible School; Doctorate, RHEMA Bible School.
E-mail: gpinckney@cvcc.edu • Telephone extension: 4571

Pinkerton, Pamela ....Associate Degree Nursing Faculty
B.S.N., West Virginia Wesleyan College; M.S.N. University of West Virginia.
Graduate Certification in Gerontology.
Email: ppinkerton@cvcc.edu • Telephone extension: 4825

Pitts, Merlene ....Receptionist/Safety & Security
Email:mpitts@cvcc.edu • Telephone extension: 0

Plumley, Kelly... Basic Skills Faculty/Data Specialist
B.S., Western Carolina University; M.P.A., Appalachian State University;
CPP (LERN).
E-mail: kplumley@cvcc.edu • Telephone extension: 4395

Pons, Angela N. .... Radiography Clinical Coordinator
A.A.Sc., Caldwell Community College & Technical Institute; B.S., Appalachian
State University; M.B.A., Gardner-Webb University.
E-mail: apons@cvcc.edu • Telephone extension:4498

Pool, Tonja .... Emergency Medical Science Faculty
B.S., Western Carolina University
E-mail: tpool@cvcc.edu • Telephone extension: 4167

Pope, Deanna ....Accounts Payable Technician/Business Office
B.S., Gardner-Webb University.
E-mail: dpope@cvcc.edu • Telephone extension: 4494

Preiser, Connie M. E. ....Director Dental Hygiene Program
A.A.Sc., Asheville-Buncombe Technical Community College; B.S., Mars Hill
College; M.H.S., Western Carolina University.
E-mail: cpreiser@cvcc.edu • Telephone extension: 4440

Preslar, Lynn E. .... Architectural Technology Faculty
A.A.Sc., Catawba Valley Community College; B.S.,Western Carolina University.
E-mail: lpreslar@cvcc.edu • Telephone extension: 4759

Price, Lori ....Customized Industry Training Director/
Workforce Development Innovation Center
B.A., University of Tennessee.
E-mail: lprice@cvcc.edu • Telephone extension: 4284

Pritchard, Ronald J. .... Furniture Upholstery Faculty
Twenty-three years experience in the furniture industry.
E-mail: rpritcha@cvcc.edu • Telephone extension: 4179

Propst, Jr., David..................Learning Skills Specialist/Assistive Technology/
Learning Assistance Center
A.A.Sc., Catawba Valley Community College; B.S., Lenoir-Rhyne University.
E-mail: dpropst@cvcc.edu • Telephone extension: 4384

Pugh, Mary A. .... Administrative Assistant/
Department of Industrial Technologies
Diploma, South East Arkansas College.
E-mail: mpugh@cvcc.edu • Telephone extension: 4241

Putman, Kristine ....Student Records Technician/Student Services
A.A.Sc., Catawba Valley Community College.
E-mail: kputman@cvcc.edu • Telephone extension: 4261

Ray, Kimberly M. ....Cosmetology Faculty/HCAM
Cosmetology Teachers License.
E-mail: kmray@cvcc.edu.

Ray, Teresa .... Director of Career Services
B.A., M.A., Lenoir-Rhyne University.
E-mail: tray@cvcc.edu • Telephone extension: 4806

Reep, Regina A. ....Sociology Faculty
B.S., M.A., Appalachian State University.
E-mail:rreep@cvcc.edu • Telephone extension: 4110

Rees, Becky I. ....Executive Assistant/Vice President of Instruction
Catawba Valley Community College.
E-mail: brees@cvcc.edu • Telephone extension: 4296

Regenbogen, Scott.....................................R & D Specialist/Mfg. Solutions Center
B.F.A., Philadelphia College of Art.
E-mail: sregenbogen@manufacturingsolutionscenter.org•Telephone extension:4449

Reid, Marshall.. Accounting Faculty
B.S., North Carolina A & T State University; M.B.A., Atlanta University,CPA.
E-mail: mreid@cvcc.edu • Telephone extension: 4313

Reinhardt, Carolyn A. .... Web Graphic Designer/Manager/
Community Relations
A.A.S., Catawba Valley Community College.
E-mail: creinhardt@cvcc.edu • Telephone extension: 4256

Reynolds, Mary M. ....Director of Community Relations/PIO
A.A.Sc., Central Piedmont Community College; B.S., Appalachian State
University.
E-mail: mreynolds@cvcc.edu • Telephone extension: 4387

Richard, Fred...Computer Science Faculty
B.S., North Carolina State University; M.S., University of North Carolina
at Charlotte.
E-mail: frichard@cvcc.edu • Telephone extension: 4491

Richard, Laura D. .... Director, Healthcare Mgt Tech/Medical Office Admn
B.S.P.H., University of North Carolina at Chapel Hill; M.H.A., Medical College
of Virginia, Virginia Commonwealth University.
E-mail: lrichard@cvcc.edu • Telephone extension: 4523

Ritchie, Carolyn ....Receptionist/Safety & Security
A.A.S., Catawba Valley Community College.
E-mail: critchie@cvcc.edu • Telephone extension: 0

Roberts, Walter G. .... Basic Skills Faculty/DOC
B.S., North Carolina State University.
E-mail:wroberts@cvcc.edu • Telephone number: 828-632-1331

Robinson, Mark..Maintenance Mechanic/HVAC
Diploma, Catawba Valley Community College.
Telephone extension: 4236

Rosenbalm, Sabrena................Polysomnography Clinical Coordinator/Faculty
A.A.S., Catawba Valley Community College; B.A., Lenoir-Rhyne University.
E-mail: srosenbalm@cvcc.edu • Telephone extension: 4619

Ross, Bryan ....Maintenance Technician II/ Facility Services
Telephone extension: 4236

Ross, Donna B. ....Department Head/Humanities
B.A., M.A., Ed.S., Ed.D., Appalachian State University.
E-mail: dross@cvcc.edu • Telephone extension: 4111

Ross, Robin ....Respiratory Care Faculty
A.A.S., Catawba Valley Community College; B.S., East Carolina University;
M.S., Mountain State University.
E-mail: rross@cvcc.edu • Telephone extension: 4462

Rouse, Kevin...Executive Officer/
Office of Accountability, Efficiency, and Effectiveness
B.A., Atlantic Christian College; M.A., East Carolina University.; Ed.S.,
Appalachian State University, Developmental Education Specialist ASU
Kellogg Institute.
E-mail: krouse@cvcc.edu • Telephone extension: 4376

Rumple, Jr., James C. ....English Faculty
A.A., A.A.Sc., Mitchell Community College; B.A., Davidson College; M.A.,
University of North Carolina at Charlotte.
E-mail: jrumple@cvcc.edu • Telephone extension: 4379

Runge, Debra .... Administrative Assistant/Deans of Instruction Area
Diploma, Catawba Valley Community College.
E-mail: drunge@cvcc.edu • Telephone extension 4612

Rutherford, Shelisha .... Analytical Lab Technician/Mfg. Solutions Center
Catawba Valley Community College; Brookstone Business College.
E-mail: srutherford@manufacturingsolutionscenter.org • Telephone extension: 4145

Sain, Jerry S. ....LAC Writing Center Coordinator/Humanities Faculty
B.A., University of North Carolina-Chapel Hill; M.A., Appalachian
State University.
E-mail: jsain@cvcc.edu • Telephone extension: 4562/4558

Saine, Debbie .... Basic Skills Senior Faculty Coordinator
B.A., Lenoir-Rhyne University. Additional Studies: Appalachian State University.
E-mail: dsaine@cvcc.edu • Telephone extension: 4357

Scott, Johnny..Sociology/Political Science Faculty
A.A., Florence-Darlington Technical College; B.S., Gardner-Webb University;
M.A., Appalachian State University.
E-mail: jscott@cvcc.edu • Telephone extension: 4623

Seabock, Sarah.................. Payroll Technician/East Campus Business Office
A.B., Lenoir-Rhyne University.
E-mail: sseabock@cvcc.edu • Telephone extension: 4321

Seals, Mary ....Educational Technology Support Technician
A.A.Sc., Catawba Valley Community College.
E-mail: mseals@cvcc.edu • Telephone extension: 4832

Shelton, Sarah H. .... Director of Polysomnography/
Electroneurodiagnostic Technology
A.A.S., Catawba Valley Community College, Southwestern Community Col-
lege; B.A., Ashford University.
E-mail: shoffman@cvcc.edu • Telephone extension: 4517

Sherrill, Mary.. Purchasing Agent/Business Office
A.A.Sc., Caldwell Community College and Technical Institute,
B.S., Gardner-Webb University.
E-mail: msherrill@cvcc.edu • Telephone extension: 4275

Shields, Annis .... Developmental English and Reading Faculty
B.A., University of Louisiana at Lafayette; M.S.E, State University of New
York at Cortland.
Email: ashields@cvcc.edu • Telephone extension: 4577

Sigal, Ari ....Director, Library Reference and A.S.K.
B.A., University of Arizona; M.L.S., University of South Florida.
E-mail: asigal@cvcc.edu • Telephone extension: 4355

Sigmon, Kimberly.........................Testing Lab Technician/Mfg. Solutions Center
Twelve years experience in the hosiery industry.
E-mail: ksigmon@manufacturingsolutionscenter.org • Telephone extension: 4189

Sigmon, Mark ....Welding Technology Faculty/Bandys High School
A.A.S., Catawba Valley Community College.
E-mail: msigmon@cvcc.edu • Telephone: (828) 241-3171, ext.,5605

Sigmon, Rodney L. ....Prototyping and R&D/Mfg. Solutions Center
Sixteen years experience in the hosiery industry.
E-mail: rsigmon@manufacturingsolutionscenter.org • Telephone extension: 4144

Sjaardema, Mary Beth ....Administrative Assistant/Foundation, Inc.
A.A.Sc., Western Piedmont Community College.
E-mail: msjaardema@cvcc.edu • Telephone extension: 4282

Small, Rick A. ....Knitting Technician Training/Mfg. Solutions Center
B.S. Western Carolina University.
E-mail: rsmall@manufacturingsolutionscenter.org • Telephone extension: 4265

Smith, Thomas E. ....Electronics/Electrical Faculty
Certificate, L.A. Pierce College.
E-mail:tsmith@cvcc.edu • Telephone extension: 4354

Snow, Teresa ....English Faculty
B.A., Western Carolina University; M.A., Wake Forest University.
E-mail: tsnow@cvcc.edu • Telephone extension: 4389

Sparkman, Thaddeus.....................Director, Health Information Technology/
Workforce Development Grant
B.S., Appalachian State University; M.A., National University; M.B.A.,
Southern Illinois University. Certifications: Board Certified Fellow American
College of Healthcare Executives (FACHE); Board Certified Fellow American
Academy of Medical Administration (FAAMA).
E-mail: tsparkman@cvcc.edu • Telephone extension: 4701

Spencer, Judy .... Student Records Technician/Student Services
A.A.Sc., Catawba Valley Community College.
E-mail: jspencer@cvcc.edu • Telephone extension: 4213

Sperry, Ann E. .... Operations Manager/ASU Hickory Center
A.B., Duke University; M.A., Appalachian State University.
E-mail: asperry@cvcc.edu • Telephone extension: 4334

St. Louis, Daniel C. ....Director/Mfg. Solutions Center
B.S., North Carolina State University. Eighteen years experience in the textile
and hosiery industry.
E-mail: dstlouis@manufacturingsolutionscenter.org • Telephone extension: 4292

Starnes, Lynn D. ....Evening Administrative Clerk/Safety & Security
E-mail: lstarnes@cvcc.edu • Telephone extension: 4198

Starnes, Michael...........Department Head/Furniture Production Technology/DOC
A.A.Sc., Catawba Valley Community College.

Stephens, Tonya ....Educational Technology Specialist
B.A. Lees-McRae College; M.S. University of Pheonix. Additional studies:
University of North Carolina at Greensboro. Certifications: Cisco Certified
Network Associate; Cisco Certified Academy Instructor.
E-mail: tstephen@cvcc.edu • Telephone extension: 4109

Stepp, Brenda ....Department Head/Associate Degree Nursing
B.S., Western Carolina University; M.S.N., University of North Carolina at
Charlotte.
E-mail: bstepp@cvcc.edu • Telephone extension: 4344

Stinson, Kim ....Drama Faculty
B.F.A., North Carolina School of the Arts; M.A., Miami University
(Ohio); M.F.A., Spalding University.
E-mail: kstinson@cvcc.edu • Telephone extension: 4406

Stone, Fred B. ....Data Processing Faculty
B.S., University of South Carolina; M.A., Appalachian State University.
E-mail: fstone@cvcc.edu • Telephone extension: 4317

Stone, Laura .... Testing Center Co-Cordinator/Student Services
B.S., Miami University.
E-mail: lstone@cvcc.edu • Telephone extension: 4260

Story, Mark ....Information Systems/Internet Technologies Faculty
B.S., M.S., Appalachian State University.
E-mail: mstory@cvcc.edu • Telephone extension: 4035

Straight, Alan ....Courier/Facility Services
Telephone extension: 4236

Streater, David W. ......Executive Officer of Academic Services/ASU Hickory Center
B.A., Pfeiffer University; M.S.C.J., Rollins College; Ph.D. Barry University.
Sixteen years experience in the criminal justice field.
E-mail: david.streater@cvcc.edu • Telephone extension: 4149

Styles, Jess ....Computer Technician/IT/ASU Hickory Center
B.S. Appalachian State University.
E-mail: jstyles@cvcc.edu • Telephone extension: 4447

Thomas, Amy ....Assistant Director, The Tarlton Complex
B.A., Lenoir-Rhyne University.
E-mail: athomas@cvcc.edu • Telephone extension: 4009

Thomas, James...Customized Industry Training/
PLC and Robotics Faculty
B.S.E.E.; Penn State University.
E-mail: jdthomas@cvcc.edu • Telephone extension: 4202

Thornburg, Timothy ....Welding Technology Faculty/St. Stephens High School
A.A.Sc., Catawba Valley Community College.
E-mail: tthornburg@cvcc.edu • Telephone: 828-256-9841, ext. 323

Tibbs, Melanie ....Accounting/Payroll Technician/Business Office
Catawba Valley Community College.
E-mail: mtibbs@cvcc.edu • Telephone extension: 4274

Toney, Cheri .... Administrative Clerk/
Learning and Personal Enrichment Innovation Center
E-mail: ctoney@cvcc.edu • Telephone extension: 4320

Touchette, Collette W. .... Mathematics Faculty
A.A.Sc., Catawba Valley Community College; B.A., M.Ed., University of North
Carolina at Greensboro; Master's Certificate, Georgetown University.
E-mail: ctouchette@cvcc.edu • Telephone extension: 4533

Trado, Donna ....Director, Health & Human Services
B.A., University of North Carolina at Chapel Hill.
E-mail: dtrado@cvcc.edu • Telephone extension: 4325

Travis, Michael ....Groundskeeper/Facility Services
Telephone extension: 4236

Tucker, Mary.. Basic Skills/GED Supervisor
A.A.Sc., Catawba Valley Community College; B.S., Gardner-Webb
University.
E-mail: mtucker@cvcc.edu • Telephone extension: 4208

Tumey, Darcie..Business Administration Faculty
B.A., University of North Caroline at Chapel Hill; M.B.A. Pfeiffer University.
E-mail: dtumey@cvcc.edu • Telephone extension: 4011

Turbyfill, Darris L. .... Furniture Technology Faculty
B.S., North Carolina State University; M.A., Ed.S., Appalachian State
University. Twelve years experience in the furniture industry.
E-mail: dturbyfill@cvcc.edu • Telephone extension: 4364

Ullger, Nathan A. .... Telecommunications Specialist
B.S., M.S., East Carolina University.
E-mail:nullger@cvcc.edu • Telephone extension: 4314

Vang, Sia ....Office Manager/Student Services
A.A.S., Catawba Valley Community College.
E-Mail; svang@cvcc.edu • Telephone extension: 4487

Von Jares, Andrea....................... Acquisitions Technician/Library Services
B.S., Rollins College.
E-mail: avonjares@cvcc.edu • Telephone extension: 4232

Walsh, Luke T. .... Mathematics Faculty
B.A. Indiana University; M.A., Appalachian State University.
E-mail:lwalsh@cvcc.edu • Telephone extension: 4489

Walters, Margaret.. Mathematics Faculty
B.S., Auburn University; M.A., Appalachian State University.
E-mail: mwalters@cvcc.edu • Telephone extension: 4422

Ward, Jill ....Records Technician/East Campus Business Office
Catawba Valley Community College.
E-mail: jward@cvcc.edu • Telephone extension: 4392

Ward, Lori ....Director, Campus, Community and Adult Learner Outreach/
DBA Scholars Program/Student and Community Engagement
B.S., Appalachian State University; M.A., Liberty University.
E-mail: lward@cvcc.edu • Telephone extension:4264

Watkins, Paul ....IT Server Administrator/Information Technology
A.A.S., Catawba Valley Community College; B.S., Franklin University; M.S.,
East Carolina University. Certifications: Linux+, A+, and Microsoft MCITP.
E-mail: pwatkins@cvcc.edu • Telephone extension: 4461.

Watson, Jr., Jon K. .... Architectural Technology Faculty
M. Architecture, Savannah College of Art and Design.
E-mail: jowatson@cvcc.edu • Telephone extension: 4760

Watson, Joyce C. ....Director, Human Resources Development
A.A.Sc., Caldwell Community College; B.T., M.A.,Appalachian State University.
E-mail: jwatson@cvcc.edu • Telephone extension: 4370

Watson, Polly A. ....English Faculty
    B.S., M.A., East Carolina University.
    E-mail: pwatson@cvcc.edu • Telephone extension: 4209

Webb, Roger.. Psychology Faculty
    A.B., M.A., Lenoir-Rhyne University. Additional Studies; University of Iowa.
    E-mail: rwebb@cvcc.edu • Telephone extension: 4631

Wegner, Laurie ....Director of Admissions/Student Services
    B.A., Meredith College; M.A., Lenoir-Rhyne University.
    E-mail: lwegner@cvcc.edu • Telephone extension: 4618

Whitehead, Nicole..Business Administration Faculty
    B.A.; M.B.A., Lewis University, SPHR, SixSigma Yellow Belt.
    E-mail: nwhitehead@cvcc.edu • Telephone extension: 4013

Whiteley, Emily C. ....Department Head/Biology
    A.S., Western Piedmont Community College; B.A., University of North Carolina
    at Asheville; M.S., Western Carolina University.
    E-mail: ewhiteley@cvcc.edu • Telephone extension: 4361

Wilks, Adel............................ Adminstrative Assistant/Job Creation Center
    E-mail: awilks@cvcc.edu • Telephone extension: 4100

Williams, Anne R. ....Director, Student Life/
    Student and Community Engagement
    B.A., University of North Carolina at Greensboro; M.R.P., University
    of North Carolina at Chapel Hill.
    E-mail: awilliams@cvcc.edu • Telephone extension: 4285

Williams, Randall L. ....Learning Skills Specialist/
    Learning Assistance Center
    A.A.S., Caldwell Community College and Technical Institute; B.A.,
    Lenoir-Rhyne College; M.S., Appalachian State University.
    E-mail: rwilliams@cvcc.edu • Telephone extension: 4524

Willis, Harold.................Maintenance Mechanic (HVAC)/Facility Services
    Telephone extension: 4236

Wilson, Dena................................. Student Records Technician/Student Services
    A.A.Sc., Brown Mackie.
    E-mail: dwilson@cvcc.edu • Telephone extension: 4569

Wilson, Jeremy..Criminal Justice/History Faculty
    B.S., North Carolina State University; M.A., Appalachian State University.
    E-mail: jwilson@cvcc.edu • Telephone extension: 4196

Wilson, Staci. ....Director of Library Services
    B.A., University of North Carolina at Chapel Hill; M.L.S., North Carolina
    Central University.
    E-mail: swilson@cvcc.edu • Telephone extension: 4525

Wimbush, Asante ....Support Staff/Student Services
    A.A.Sc., Catawba Valley Community College.
    E:mail: awinbush@cvcc.edu • Telephone extension: 4216

Winters, Katherine..... ISO Coordinator/Special Projects/Mfg. Solutions Center
    B.S.; North Carolina State University.
    E-mail: kwinters@manufacturingsolutionscenter.org • Telephone extension: 4151

Wise, Jeremy ....Grounds Technician/Facility Services
    Telephone extension: 4236

Wise, Mark.. Director of Facility Services
    Telephone extension: 4114

Wise, Monica B. ....Special Projects Coordinator/Mfg. Solutions Center
    B.S., North Carolina State University.
    E-mail: mwise@manufacturingsolutionscenter.org • Telephone extension: 4518

Womack, Robert ....English Faculty
    B.S., Missouri Southern State University; M.A., Lenoir-Rhyne University;
    M.A., University of North Carolina-Charlotte.
    E-mail: rwomack@cvcc.edu • Telephone extension: 4680

Wooten, Kristy ....English Faculty
    B.A., M.A., University of North Carolina at Wilmington.
    E-mail: kwooten@cvcc.edu • Telephone extension: 4375

Wright, Kristin ....Program Coordinator/
    Workforce Development Inovation Center
    B.S., Western Carolina University; M.S., Appalachian State University.
    E-mail: kwright@cvcc.edu • Telephone extension: 4294

Wright, Maxine D. ....Curriculum Schedule Specialist/
    Curriculum & FacilitiesManagement
    A.A.Sc., Catawba Valley Community College.
    E-mail: mwright@cvcc.edu • Telephone: 4606

Yandow, Deborah..Cosmetology Faculty
    A.A.S., State University of New York.
    E-mail: dyandow@cvcc.edu • Telephone extension: 4118

York, Linda ....Administrative Assistant/Mfg. Solutions Center
    Catawba Valley Community College.
    E-mail:lyork@cvcc.edu • Telephone extension: 4265

Young, C. Joe ....Photographic Technology Faculty
    A.A., Rowan-Cabarrus Community College; B.S.B.A., Appalachian State
    University; B.S., Appalachian State University; M.A., Savannah College of
    Art and Design.
    E-mail: jyoung@cvcc.edu • Telephone extension: 4467

Young, Mary Ellen ....Furniture Cutting & Sewing Faculty
    Thirty seven years experience in the furniture industry.
    E-mail: myoung@cvcc.edu • Telephone extension: 4410

Yount, Gaye S. .... Testing Center Co-Coordinator/Student Services
    B.S., Appalachian State University.
    E-mail: gyount@cvcc.edu • Telephone extension: 4451

Zimmermann, Melanie.......Senior Graphic Designer/Community Relations
    A.A.S., Catawba Valley Community College.
    E-mail: mzimmermann@cvcc.edu • Telephone extension: 4598

Index