DRIVING FORCE

WAKE TECH COMMUNITY COLLEGE CATALOG 2011-2012
VOLUME 33

9101 Fayetteville Rd • Raleigh, NC 27603 • 919.866.5000 • www.waketech.edu

ATTENTION!

This document was last updated
February 15, 2012

Please see individual
web pages at
http://catalog.waketech.edu
for the most current information.

Should you have any questions or comments
please direct them to policies@waketech.edu or 919-866-5603.
Thank you.

Welcome to Wake Tech!

This catalog has been prepared for you, to help you navigate the many courses, programs, and academic pathways Wake Tech offers.

Our curriculum courses can help you earn degrees, diplomas, and certificates – credentials that are vital for finding the employment you want and for workplace advancement and continued success. They can also be the first part of your higher education journey, opening doors to additional studies and advanced degrees. Our continuing education options can help you learn specialized skills, grow professionally, and explore your creative or entrepreneurial interests.

Wake Tech has provided high-quality education and training for the Wake County region for almost half a century. Our classrooms and hands-on learning experiences prepare students and workers at every level to meet the challenges of the 21st century. Our instructors stay "ahead of the curve" with innovative approaches, while insisting on a standard of excellence. Wake Tech graduates are doing great things in health care, computer technologies, hospitality, and many other fields – here in our community and beyond.

We believe you'll find the options you need here at Wake Tech, and we hope to share in the exciting journey ahead.

Sincerely,

Stephen C Scott

Dr. Stephen C. Scott
President

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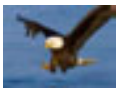


Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

About the Catalog

ABOUT THE CATALOG

The Wake Technical Community College Catalog is an information and reference guide on College policies, facilities, degree, certificate and diploma programs, course offerings, services, and personnel. The statements in the catalog are for informational purposes only, and should not be considered the basis of a contract between the institution and the student.

Generally, the provisions outlined in the catalog are applicable as stated, but Wake Technical Community College reserves the right to initiate changes, including but not limited to academic requirements for graduation, without direct notification to individuals. Any statement in this catalog is subject to change by the College. Though the College catalog is produced as a reference guide, each student is responsible for keeping apprised of current requirements for graduation for a particular degree program. Please visit our website at http://catalog.waketech.edu for the most recent version of this catalog.

DISABILITY SUPPORT

Wake Technical Community College does not discriminate on the basis of disability in the admissions or employment processes or in access to programs, facilities, or activities. The following persons, whose offices are at the Main Campus, located at 9101 Fayetteville Rd., (401 South) have been designated to coordinate compliance with the non-discrimination requirements of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973:

Disability Services/Access for Students
Janet Killen - 919-866-5670 or TDD – 919-779-0668

Employment Access Benita Clark, HR Director 919-866-5937

Facilities Access Wendell Goodwin, Facilities Engineering Officer 919-866-5148

This catalog can be accessed online at http://disabilityservices.waketech.edu. If an alternate format (such as CD) is needed please contact Janet Killen at jtkillen@waketech.edu or 919 866-5669.

EQUAL ACCESS

Wake Technical Community College is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, or sexual orientation. For more information, see the Non-Discriminatory Policy in the Admissions section of this catalog.

SEX CRIMES PREVENTION ACT

The Federal Campus Sex Crimes Prevention Act requires registered sex offenders/predators to provide to the Wake County Sheriff's Office notice of each institution of higher education in the state at which the offender/predator is employed, carries on a vocation, or is a student. Any member of the Wake Technical Community College community who wishes to obtain further information regarding sexual offenders/predators in their area may refer to any the following websites:

State websites
http://www.fbi.gov/hq/cid/cac/states.htm

National Sex Offender Public Registry
http://www.nsopr.gov

NC Sex Offender and Public Protection Registry
http://www.ncfindoffender.gov or call 919-856-6900.

CHANGE IN STUDENT DATA

Changes of name, address, telephone numbers, or e-mail must be reported, in writing, to the Registration and Student Records Services Division immediately upon change. Address change requests may be submitted via WebAdvisor.

Send changes to Registration and Student Record Services Division, Wake Technical Community College, 9101 Fayetteville Road, Raleigh, NC 27603

OTHER CHANGES

The Board of Trustees and/or administration of Wake Technical Community College reserve the right to change at any time, without notice, graduation requirements; fees and other charges; curriculum, course structure, and content; and other such matters as may be within its control, notwithstanding any information set forth in this catalog.

AFFIRMATIVE ACTION/EQUAL OPPORTUNITY

Wake Technical Community College offers Equal Employment and Educational Opportunities to all employees, students, prospective employees, and prospective students. Affirmative Action, Equal Educational Opportunities, and compliance with the Americans with Disabilities Act are viewed by the Board of Trustees as an integral part of the mission and purpose of Wake Technical Community College.

Questions concerning this policy should be addressed to:

Student Matters	Employee Matters:
Dean of Students	Director of Human Resources/EEO Officer
919-866-5604	919-866-5937

Wake Technical Community College
9101 Fayetteville Road, Raleigh, NC 27603

GENERAL INFORMATION

HISTORY

Wake Technical Community College is a tax-supported, public, non-profit, educational institution under the control of a Board of Trustees. It is part of the North Carolina Community College System, and is accredited by the Southern Association of Colleges and Schools. Authority for the establishment of the College is found in Chapter 115D of the General Statutes of North Carolina.

The College was chartered on April 3, 1958, as the Wake County Industrial Education Center. Operation actually began October 7, 1963, with 34 curriculum students on campus and 270 enrolled in the various industrial training programs. On January 8, 1964, the Center was formally dedicated as W.W. Holding Industrial Education Center and transferred from the Wake County Board of Education to a Board of Trustees. On March 3, 1966, W.W. Holding Industrial Education Center was granted approval by the State Board of Education as W.W. Holding Technical Institute and licensed to award the Associate in Applied Science degree. The name was changed to Wake Technical Institute in September 1974 and to Wake Technical College on March 1, 1980. The name was changed to Wake Technical Community College on December 1, 1987.

The College was first accredited by the Southern Association of Colleges and Schools on December 3, 1970.

MISSION

The mission of Wake Technical Community College is to improve and enrich lives by meeting the lifelong education, training, and workforce development needs of the communities we serve.

In pursuit of its mission, this public two-year comprehensive postsecondary educational institution adheres to an open-door policy by offering quality accessible and affordable educational opportunities to all adults regardless of age, sex, socioeconomic status, ethnic origin, race, religion, or disability. To meet the needs of its community, the College focuses on providing support services, resources, community outreach, and partnerships; programs in basic skills development; vocational, technical, and occupational training; and college/university transfer preparation.

The College is committed to promoting individual success in the workplace and higher education and to promoting cultural, social, and economic development.

VISION

At Wake Technical Community College, our vision is a college that exceeds the expectations of our stakeholders for effective lifelong education, training, and workforce development by providing world-class programs and services.

CORE VALUES

Wake Technical Community College will structure its operations, training and educational programs around the Core Values of accountability, respect, responsibility, critical thinking, communication, and collaboration.

Accountability - Accountability is essential for an environment of learning. Those who are accountable stand by their words and actions, taking full responsibility for what they create and for what they contribute to the community.

Respect - Respect is a prerequisite for enhancing learning. Community members who respect themselves and others help create a safe, yet open, climate of learning.

Responsibility - Responsibility is the root of success. Students who assume personal responsibility for their education will reach their goals. Responsible students also make contributions to their communities.

Critical Thinking - Critical thinking is the fundamental purpose of higher education. The ability to solve problems through the application of the appropriate skills is critical to all disciplines.

Communication - Communication is increasingly the key competency for living and working in the information age. Communicating effectively in oral and written forms through traditional and new media is a powerful tool for personal and career success.

Collaboration - Collaboration, by bringing together individual knowledge and talents, creates teams that are greater than the sum of their parts. Such teamwork maximizes benefits to individuals and the community.

COLLEGE GOALS

Student Success
Provide a dynamic learning environment to ensure successful achievement of students' goals by administering sound policies, curricula, instruction, and support services.

Workforce Development
In collaboration with Regional Economic Development Partnerships, identify the workforce needs of emerging jobs in rural and urban economies in North Carolina. Develop and implement the educational and training programs necessary to meet the workforce needs of each community college service area in North Carolina and promote recruitment, retention, and development of high quality faculty and staff necessary to achieve the educational and training objectives of the community college system and provide North Carolina with a world-class workforce.

Diverse Populations Learning Needs
Provide North Carolina citizens with the opportunity to develop essential skills for lifelong learning. Upgrade and retrain North Carolina learners for the workplace through flexible, accessible, and customized educational and training programs within their communities.

Resources
Continuously research, analyze, and secure the resources necessary to fulfill the mission of the North Carolina Community College System and develop processes for measuring the effectiveness of resource allocations and utilization, within the North Carolina Community College System.

Technology
Encourage and support North Carolina Community College faculty and staff in the effective and efficient uses of instructional technology and administrative computing systems to improve the delivery of academic programs to North Carolina citizens.

Community Services
Provide courses and support service activities for the enrichment of the community's civic, economic, and cultural needs.

PROGRAMS & SERVICES

The College translates its mission, vision, values, and goals into action through clearly defined programs and services. Specifically, the College:

- **offers** credit programs leading to associate degrees, diplomas, and certificates designed for immediate entry into employment, an associate degree in general education, and associate degrees designed to transfer to four-year institutions. The College also offers pre-curriculum programs for students to develop academic proficiency so that they may successfully complete curriculum courses;

- **provides** occupational career enhancement programs for individuals and support for economic development to businesses, industries, and agencies. Basic skills education, English as a Second Language and a wide variety of continuing education courses and programs for personal enrichment are offered on campus and throughout the county. The College further serves its constituents by providing a broad range of community services, partnerships, and outreach programs;

- **provides** a wide range of support services designed to assist students in successfully fulfilling their education and occupational goals. These services, developed to meet the diverse needs of individual students, begin with their initial contact with the College and continue throughout their enrollment and job placement or transfer for further study; and

- **practices** sound fiscal management and systematic planning to provide facilities, equipment, and state-of-the art technology to ensure quality education opportunities at secure facilities accessible to Wake County citizens.

ACCREDITATION

Southern Association of Colleges and Schools Accreditation (SACS)
Wake Technical Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award the associate degree.

Contact information: 1866 Southern Lane, Decatur, Georgia 30033-4097, Telephone number 404-679-4501
Website: http://www.sacscoc.org/

Specific Program Accreditation

Automotive Systems Technology Accreditation
The college's Automotive Systems Technology associate degree program has received certification by the National Automotive Technicians Education Foundation (NATEF) and accredited by National Institute for Automotive Service Excellence (ASE). All eight areas meet the strict industry standards required for ASE MASTER certification. This is the highest level of achievement recognized by the National Institute for Automotive Excellence (ASE).

Criminal Justice Program Accreditation
The college's Criminal Justice Technology program is accredited by the North Carolina Criminal Justice Education and Training Standards Commission.

Culinary Technology Program Accreditation
The college's Culinary Technology program is accredited by the American Culinary Federation.

Dental Assisting and Dental Hygiene Programs Accreditation
The college's programs in Dental Assisting and Dental Hygiene have received accreditation (without reporting requirements) status from the American Dental Association, Commission on Dental Accreditation. A copy of the appropriate accreditation standards and/or the Commission's policy and procedure for submission of complaints may be obtained by contacting the Commission at 211 East Chicago Avenue, Chicago, IL 60611-2678, or by calling 1-800-621-8099, extension 4653.

Detention Officer's Certificate
The college's Detention Officer's Certificate program has been accredited by the North Carolina Sheriffs' Education and Training Standards Commission to offer the certification course for individuals seeking to become detention officers effective March 16, 2011. North Carolina Sheriffs' Education and Training Standards Commission; North Carolina Department of Justice; 9001 Mail Service Center; Raleigh, North Carolina 27699-9001.

Heavy Equipment and Transport Technology/ Construction Equipment Systems Program Accreditation
The college's Heavy Equipment and Transport Technology/Construction Equipment Systems Program is accredited by Accreditation Board of the Associated Equipment Distributors.

Medical Assisting Program Accreditation
Wake Technical Community College's Medical Assisting Diploma program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Medical Lab Technology Program Accreditation
The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) is the accrediting agency for the Medical Laboratory Technology program and the approving agency for the Phlebotomy program. The NAACLS is located at 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119 (Telephone number 773-714-8880).

Radiography Program Accreditation
Wake Technical Community College's program in Radiography is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The JRCERT is located at 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182 (Telephone number 312-704-5300).

Surgical Technology Program Accreditation
The college's Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on recommendation of the Accreditation Review Committee for Surgical Technology (ARC-ST).

APPROVALS

American Culinary Federation
National Accrediting Agency for Clinical Laboratory Sciences
North Carolina Board of Nursing
North Carolina Department of Health and Human Services – Division of Health Service Regulation
North Carolina Office of Emergency Medical Services
North Carolina Real Estate Commission
North Carolina State Approving Agency for Veterans Education and Training
North Carolina State Board of Community Colleges

MEMBERSHIPS

Air Conditioning Contractors of America (ACCA)
American Association of Collegiate Registrars and Admissions Officers (AACRAO)
American Association of Community Colleges (AACC)
American Association of Medical Assistants Endowment (AAMAE)

American College & University Presidents' Climate Commitment (ACUPCC)
American Mathematical Association of Two-Year Colleges (AMATYC)
Association Community College Business Officials (ACCBO)
Association for the Advancement of Sustainability in Higher Education (AASHE)
Association of Community College Facility Operations (ACCFO)
Association of Community College Trustees (ACCT)
Association of Fundraising Professionals (AFP)
Carolinas Association of Collegiate Registrars and Admissions Officers (CACRAO)
Center for Community College Student Engagement (CCCSE)
Chamber of Commerce - Apex
Chamber of Commerce - Cary
Chamber of Commerce - Fuquay-Varina
Chamber of Commerce - Garner
Chamber of Commerce - Holly Springs
Chamber of Commerce - Knightdale
Chamber of Commerce - Morrisville
Chamber of Commerce – Raleigh
Chamber of Commerce - Rolesville
Chamber of Commerce - Wake Forest
Chamber of Commerce - Wendell
Chamber of Commerce - Zebulon
College and University Professional Association For Human Resources (CUPA-HR)
Committee on Accreditation of Allied Health Education Programs (CAAHEP)
Community College Business Officers (CCBO)
Construction Management Association of America (CMAA)
Contingency Planning Association of the Carolinas (CPAC)
Cooperative Education and Internship Association, Inc. (CEIA)
Council for Adult & Experiential Learning (CAEL)
Council for Entrepreneurial Development (CED)
Council for Resource Development (CRD)
Council on Law in Higher Education (CLHE)
EduCause
Help Desk Institute (HDI)
Home Builders Association of Raleigh-Wake County
International Association of Campus Law Enforcement Administrators (IACLEA)
International Council on Hotel, Restaurant, and Institutional Education (ICHRIE)
Leadership Raleigh Alumni Association
Learning Resources Network (LERN)
NASPA (Student Affairs Administrators in Higher Education)
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
National Alternate Fuel Training Consortium (NAFTC)
National Association for Community College Entrepreneurship (NACCE)
National Association of Colleges and Employers (NACE)
National Association of Educational Procurement (NAEP)
National Association of International Educators (NAFSA)
National Association of Student Financial Aid Administrators (NASFAA)
National Council for Marketing & Public Relations (NCMPR)
National Council on Student Development (NCSD)
National Fire Protection Association
National HEP Camp Association
National Institute of Governmental Purchasing (NIGP)
National Institute for Staff & Organizational Development – The University of Texas (NISOD)
National Organization for Associate Degree Nursing (N-OADN)
National Restaurant Association/NC Restaurant Association (NC RLA)
NC Sustainable Energy Association (NCSEA)
North Carolina Association of Campus Law Enforcement Administration (NCACLEA)
North Carolina Association of Colleges and Employers (NCACE)
North Carolina Association of Community College Trustees (NCACCT)
North Carolina Association of Government Information Officers (NCAGIO)
North Carolina Association on Higher Education and Disability (NC-AHEAD)
North Carolina Association of Volunteer Administrators (NCAVA)
North Carolina Campus Compact
North Carolina Chamber (formerly NCCBI)
North Carolina College and University Professional Association – Human Resources (NCCUPA-HR)
North Carolina Community College Student Development Personnel Association (N3CSDPA)

North Carolina Council of Officers for Resource Development (NC CORD)North Carolina Law Enforcement Accreditation Network (NCLEAN/CALEA)
North Carolina Technology Association (NCTA)
North Carolina World Trade Association
Public Relations Information Marketing Association (PRIMA)
Raleigh Television Network
Raleigh-Wake Human Resource Management Association (RWHRMA)
Regional Transportation Alliance
Society for Human Resource Management
Southern Association of Colleges & Schools
Southern Association of Collegiate Registrars and Admissions Officers (SACRAO)
Southern Association of Community Jr. & Tech Colleges (SACJTC)
Southern Growth Policies Board
Student Leadership Institute
Triangle Area Hotel-Motel Association (TAHMA)
Triangle J Council of Gov't Triangle Clean Cities Coalition
Triangle Society for Human Resource Management (TSHRM)
Triangle Tomorrow, Inc.
University and College Designers Association (UCDA)
US Green Building Council (USGBC)
Wake AHEC/Triangle Nurse Appreciate Council
Wake Area Business Advisory Council (BAC)
Wake Association of Volunteer Administrators (WAVA)
World Future Society

FOUNDATION

Wake Technical Community College Foundation solicits private support from corporations, foundations and individuals.

Gifts are used for emergency financial aid and student scholarships, equipment, recognition awards, professional development, facility improvements, and a variety of other purposes outside the scope of traditional college funding sources. The Foundation also enables the College to meet emergency funding needs as well as special opportunities that improve Wake Tech's ability to serve the community.

All private gifts to Wake Technical Community College should be directed to the Wake Technical Community College Foundation, a tax-exempt, 501(c)(3) nonprofit corporation, operating exclusively for the benefit of the College and Wake Tech students.

Donors or advisors should send correspondence to:

Executive Director
Wake Technical Community College Foundation
9101 Fayetteville Road
Raleigh, North Carolina 27603-5696
919-866-5924
omcongleton@waketech.edu
Website: http://foundation.waketech.edu/

LOCATIONS

Courses are offered at Wake Technical Community College locations throughout Wake County.

Main Campus
9101 Fayetteville Road
Raleigh, North Carolina 27603
919-866-5000
http://maincampus.waketech.edu

Wake Tech's Main Campus, located seven miles south of Raleigh on US 401, opened its doors as the Wake County Industrial Education Center in 1963 with a first class of 34 students. Today, the campus serves thousands of students each year in continuing education (non-credit) and curriculum education (for-credit) programs. Courses are offered days, evenings, weekends, and via distance education technologies.

Continuing education courses available at the Main Campus include professional training and upgrading in building/trades licensure, computer applications, and notary; and personal enrichment in foreign languages, health and wellness, motorcycle safety, and photography and videography. This campus also serves student needs for developing basic skills, English as a second language competency, and the knowledge required for GED success.

For those seeking college credit and credentials, the campus offers all the coursework necessary for two-year associate degrees for career placement and university transfer, as well as for job-ready technical diplomas and certificates requiring one year or less. The Main Campus houses accredited for-credit programs preparing students for occupations and further study in applied technologies, business technologies, computer technologies, engineering technologies, as well as the arts, humanities, mathematics, natural sciences, and social sciences.

Wake Tech's Main Campus also provides students with a comprehensive set of resources and services. Resources include a library, computer labs, skills labs, smart classrooms/conference rooms, a bookstore, and a restaurant. Services include admissions, career counseling and placement, academic advising, disability support, student life, and tutoring.

Northern Wake Campus
6600 Louisburg Road
Raleigh, North Carolina 27616
919-532-5502
http://northerncampus.waketech.edu

Wake Tech's Northern Wake Campus opened in August 2007 with two instructional buildings and a regional plant for heating and cooling. Building A is where core subjects, such as English and history, are taught. It's also the home of Student Services, including admissions, counseling, disability support services, and financial aid. Building B offers a two-story library and state-of-the-art chemistry and biology labs. It also has a bookstore and an Individualized Learning Center (ILC). A third classroom building, Building D, opened in August 2009 with computer labs, physics labs, fine arts classrooms, a distance learning classroom, and a drama room. It also has a coffee shop and wireless Internet access. There are volleyball and tennis courts for physical education.

Curriculum programs on the Northern Wake Campus include the Associate in Arts (A.A.)/Associate in Science (A.S.) for University Transfer degree programs as well as an Honors Program option. Students can also take a variety of Continuing Education classes, including art, foreign language, and basic skills. The Northern Wake Campus is the home of the Wake Tech Wachovia/Wells Fargo Center for Entrepreneurship, which provides resources for small business owners.

The Northern Wake Campus has the distinction of being the first college campus in the nation to have all LEED-certified buildings. "LEED" stands for Leadership in Energy and Environmental Design and is the U.S. Green Building Council's highest standard for environmentally-responsible construction.

Western Wake Campus
Millpond Village
3434 Kildaire Farm Road
Cary, North Carolina, 27511
919-335-1000
http://westerncampus.waketech.edu

The Western Wake Campus opened its doors in the fall of 2005 and has consistently grown in both course offerings and support services. Western Wake offers the Associate in Arts (A.A.) for University Transfer degree program, which includes 64 hours of coursework in English, math, science, and the social sciences, equivalent to the general education requirements for a bachelor's degree in a four-year college or university.

The Business and Industry Services Division provides customized employee training for area businesses. Training can be tailored for industrial, clerical, supervisory, and management occupations and includes the following:

- Apprenticeship – Customized apprenticeship programs in various trades
- Professional Development and Corporate Training – Personal development programs customized to meet the needs of participating businesses and individuals
- Customized Training Program – Customized training assistance in support of full-time production and direct customer service positions created in North Carolina. The program enhances the growth potential of NC companies while preparing North Carolina's workforce with the skills for successful employment in emerging industries. Eligible businesses and industries include manufacturing, technology intensive companies (e.g., Information Technology, Life Sciences), regional or national warehousing and distribution centers, customer support centers, air courier services, national headquarters for operations outside North Carolina, and civil service employees providing technical support to U.S. military installations in North Carolina.

- Small Business Center – Technical and managerial assistance to current and prospective business owners and operators through a variety of seminars, study courses, and one-on-one assistance

Continuing Education offers a wide variety of non-credit courses, including employability skills such as resume writing, career exploration, and basic computer classes. Other Continuing Education classes include BioWork, an entry-level biotech training certificate; medical health care office occupation certificate; English as a Second Language (ESL) competency; and online GED preparation.

Wake Tech's Western Wake Campus provides students with support services that include admissions and advising, financial aid, disability support services, a Learning Resource Center with a library and Individualized Learning Center (ILC), a computer lab, wireless access, and student government information.

Health Sciences Campus
2901 Holston Lane
Raleigh, North Carolina 27610
(behind Wake Medical Center)
919-747-0400
http://healthsciencescampus.waketech.edu

The Health Sciences campus offers both curriculum and continuing education programs in health sciences.

For those seeking careers or further credentials in the healthcare fields, our Health Sciences campus offers job-ready curriculum programs that lead to an associate degree, diploma or certificate. The Health Sciences campus houses accredited programs preparing students for occupations in Associate Degree Nursing, Dental Assisting, Dental Hygiene, Emergency Medical Science, Human Services Technology, Medical Assisting, Medical Laboratory Technology, Phlebotomy, Radiography and the imaging specialties of Computed Tomography and Magnetic Resonance Imaging, Surgical Technology, Therapeutic Massage, Associate Degree Nursing, and Pharmacy Technology (in collaboration with Johnston Community College).

Our programs are designed to meet the needs of our students as well as the standards of care mandated by employers and our accrediting bodies. All of our curriculum (for-credit) programs are taught by professionals in their fields and include clinical or co-op experiences. Our affiliations with major health care institutions, physician offices, dental offices, and other clinical sites in the area provide our students with excellent clinical training in all areas of specialization.

Admission to many of the health sciences programs is selective and limited.

Continuing Education classes offered at the Health Science Campus include: emergency medical technology, certified nursing assistant, medical terminology, medical coding, CPR, pharmacy technician practice, and mammography technician continuing education. Our Basic Skills program offers English as a Second Language (ESL) at the Health Science Campus.

Public Safety Education Campus
321 Chapanoke Road
Raleigh, North Carolina 27603
http://locations.waketech.edu/index.php?page=pstc

Wake Tech's new Public Safety Education Campus (PSEC) opened as a training center in January 2008, to serve the growing needs of area law enforcement and other public service agencies. Two years later, it was expanded into a campus with the addition of degree programs, a library, an individualized learning center (ILC), and student services. At more than 65,000 square feet, the PSEC is the first centralized training facility of its kind in Wake County.

The campus is home to Wake Tech's Criminal Justice, Latent Evidence, and Fire Protection Technologies programs, as well as the Basic Law Enforcement Training and Certified Nursing programs. It provides in-service training for law enforcement officers, firefighters, corrections officers, and emergency medical service providers.

The Public Safety Education Campus is one of the most advanced public safety and law enforcement training facilities in the Southeast, with features that include a state-of-the-art forensics lab, an incident command center, a simulations room, a defensive tactics room, and a mock courtroom and jail.

The News and Observer Adult Education Center (AEC)
1920 Capital Boulevard
Raleigh, North Carolina 27604
http://basicskills.waketech.edu/index.php

The News & Observer Adult Education Center is home to Wake Tech's Basic Skills Division. Basic Skills is designed primarily to help adults learn to read; improve math, reading, and writing skills; earn a high school diploma or GED certificate; and learn English as a second language.

The Basic Skills program is also designed to help underemployed/unemployed persons prepare for employment or further education, developmentally disabled persons achieve their potential, and families strengthen literacy skills and family bonds. No tuition is charged.

Basic Skills classes are offered at community sites as well as on Main Campus and at the Adult Education Center. Placement and orientation are conducted at class sites.

Contact the Adult Education Center at 919-334-1500 to schedule an appointment or to learn more about Basic Skills programs and their locations.

State Personnel Development Center
101 West Peace Street
Raleigh, North Carolina 27603
919-733-2474
http://locations.waketech.edu/index.php?page=spdc

Wake Technical Community College and the Office of State Personnel/Human Resource Development formed a partnership over 20 years ago to make computer software and technology training available to state employees. Wake Tech instructors teach one- and two-day short courses, curriculum classes and on-line courses on the most current software programs with a focus on those used throughout state government.

VISITORS AND CHILDREN ON CAMPUS

http://visitors.waketech.edu

Visitors are welcome on the Wake Tech campus. For the safety and security of all, immediately upon arriving, visitors are required to register at the receptionist desk at any campus. At the receptionist desk, visitors may obtain information and directions as needed. The College cannot accommodate extended non-official visits; individuals who have not registered or who are found loitering on campus may be required to leave.

Visitors, children, and any other persons not enrolled at Wake Tech are not allowed in the library or in classrooms, laboratories, or any other instructional areas (on or off campus) without prior authorization.

Children under the age of 15, who are not enrolled at Wake Tech, must be accompanied by a parent, guardian or other adult at all times and must not be left unattended in any area of the College.

At community schools sites, only persons attending classes or other College activities are permitted on the premises. Wake Tech students or employees violating the above regulations on any Wake Tech campus or community schools site will be subject to disciplinary action, up to and including termination of their enrollment or termination of their employment.

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

ADMISSION POLICIES

Open Door Policy

Wake Technical Community College follows the Open Door Policy established by the State Board of Community Colleges. This policy provides for the admission of any person who has reached the age of 18 or who has graduated from high school. This policy is based on the belief that the College has something to offer at all educational levels and that through effective guidance a person can find his or her place in the proper educational program.

Admission to the college does not guarantee admission to a program with specific admission requirements or placement criteria.

Wake Technical Community College reserves the right to refuse admission to any applicant who has been suspended or expelled from another educational institution. Such applicants will be evaluated individually.

Non-Discriminatory Policy

Wake Technical Community College offers Equal Employment and Educational Opportunities to all employees, students, prospective employees, and prospective students. Affirmative Action, Equal Educational Opportunities and compliance with the American with Disabilities Act are viewed by the Board of Trustees as an integral part of the mission and purpose of Wake Technical Community College.

Questions concerning this policy should be addressed to:

Dean of Students
Wake Technical Community College
9101 Fayetteville Road,
Raleigh, NC 27603

The Dean of Students office is located in the Student Services building, Room 121 G on the Main Campus.

STEPS TO ENROLLMENT

1. Submit the Online Application for Admission, http://admissions.waketech.edu
2. Submit all official high school transcripts if required for placement into a particular program of study. **If it is determined your high school transcript is not from a valid institution, it may affect your ability to receive financial aid**
3. Submit official college transcripts for consideration of transfer of credits in your chosen program of study. However, all college transcripts are required for Health Science programs of study.
4. Apply for financial aid, if needed
5. Take appropriate placement tests (unless waived)
6. Contact advisor for course selection
7. Attend orientation, if required by program area
8. Attend class

Any individual wishing to apply to Wake Technical Community College should complete the Online Application for Admission at http://admissions.waketech.edu/.

The application form should indicate the individual's classification as a curriculum student applicant, a special/visiting student applicant, or a concurrently enrolled (or dual enrollment) student applicant, as follows:

- A **curriculum student applicant** is any person who is pursuing admittance into a degree, diploma, or certificate program. Curriculum applicants must complete the standard Online Application for Admission and submit official high school transcripts, if required for placement into a program of study. Current and/or subsequent registrations and awarding of financial aid will be blocked if official transcripts are not on file.

- A **special/visiting student applicant** is any applicant who is planning to enroll in one or more curriculum courses but is **not** pursuing admission into a degree, diploma, or certificate program. Special/visiting student applicants must complete the standard Online Application for Admission and meet all course prerequisites. To verify completion of prerequisite courses, applicants must complete the Special Student Prerequisite Approval Form (https://secure.waketech.edu/eaglesnest/forms/files/1188_SSSpecStudPrereqAppr.pdf) and provide official or unofficial transcripts before registering.

Note: Generally, the special credit status is limited to 16 semester hours. Special credit students are not eligible for financial aid or veterans' benefits, nor are they permitted to earn any degree, diploma, or certificate awarded by the College. Students wishing to change from special credit to curriculum status must complete the standard Online Application for Admission and submit all necessary transcripts.

- **Joint High School Programs**
  High school students currently enrolled in home, private, or public school may enroll in classes at Wake Tech (with the permission of their high school) under the **dual enrollment option**. Applicants must be 16 years of age by the first day of the semester*****. To apply for dual enrollment, applicants must complete the Wake Tech Application for Admission (Wake Tech Form 66) and submit a permission form from their high school. Home and private school applicants may obtain this form on Wake Tech campuses

  ***Note:** The 2009 Session of the North Carolina General Assembly pursuant to N.C.G.S. § 115D-1.1 allows a student under the age of 16 to enroll in a community college if the college president (or president's designee) finds that the student is intellectually gifted and mature enough to justify admission. Students wishing to pursue this option should contact the Director of Admissions for specific criteria and procedures.

Transcripts for Incoming Students
Each curriculum applicant must have official copies of transcripts of all previous high school and college (if any) work submitted directly to Wake Tech. Transcripts become the property of the College upon receipt and may not be copied for student use. Faxed copies are NOT considered official transcripts. Acceptance by Wake Tech is conditional, based on receipt of all final, official transcripts.

High School: Applicants who are high school seniors must have their school submit a transcript showing work through the first semester of the senior year, as soon as possible after the semester has ended, and a supplementary transcript showing graduation at the close of school. Students are required to submit all official transcripts. Current and/or subsequent registrations and awarding of financial aid may be blocked if official transcripts are not on file.

GED: Applicants who have a high school equivalency certificate should request that an official copy be sent directly to Wake Tech. Applicants can obtain documentation from the State GED Office in the state where the GED was issued.

College: Official transcripts of previous education in other colleges and universities should be submitted to Wake Tech. **Applicants presenting transcripts of completed associate degrees, or higher, will not need to submit high school transcripts, except in Health Sciences curricula, where ALL transcripts are required.**

How do I request my transcript from Wake Tech? Print the Transcript Request form online and deliver/mail or fax to Registration and Student Records Services in the Student Services Building, Room 254, on Main Campus – or you may complete and submit the request online. For more information see the Registration and Records chapter or go to http://registration.curred.waketech.edu/transcripts.php.

PLACEMENT TESTING

The COMPASS placement examination is administered to each applicant pursuing a degree, diploma, or certain certificate programs to determine the individual's skill level and readiness. Advisors use test results to place students in the appropriate mathematics, English, reading and writing classes. Placement test results are also used to determine whether developmental instruction is needed.

A student may be exempt from taking the COMPASS placement text or portions of the placement test if they meet one of the following criteria:

- SAT scores of 520 or higher in Critical Reading (or Verbal) and 600 or higher in the Math section of SAT test, scores must be less than 5 years old at the time you apply to Wake Tech **or**
- ACT scores of 21 or higher in Reading, Writing, and Math sections of the ACT test, scores must be less than 5 years old at the time you apply to Wake Tech **or**
- A grade of "C" or better in college-level English and math course

Students who are non-native speakers of English will take the COMPASS-EFL test and may be required to enroll in English as a Foreign Language courses. More information regarding English as a Foreign Language can be found in the Student Services section under Academic Support and Opportunities. Applicants who have been notified that they need placement

testing may make an appointment online at http://testingcenter.waketech.edu or call (919) 866-5461 to schedule an appointment. To prepare for this computerized placement test, applicants should:

1. Read through "Chart Your Success on the COMPASS" available at the Wake Tech Library or purchased as a study guide.
2. Obtain a referral form from a counselor for placement test preparation at our Individualized Learning Center (ILC) prior to testing.
3. Go to http://testingcenter.waketech.edu/links.php for additional test preparation and sample test sites.

Placement Requirements for Curriculum Programs of Study

Associate Degree and Diploma Programs

- High school diploma or equivalent
- Sufficient mathematics and science to meet specific program requirements
- Placement inventories to aid in course placement and academic guidance
- Medical examination for certain Health Sciences programs
- Additional minimum requirements in some programs (contact the admissions advisor at 919-866-5000 for more information)

Certificate Programs

- Demonstrated ability to benefit from the training by having acceptable placement test scores or completion of 6 credit hours of college level coursework
- Placement inventories to aid in course placement, and academic guidance
- Medical examination for certain Health Sciences programs
- Additional minimum requirements in some programs (contact the admissions advisor at 919-866-5000 for more information)

In some instances, licensing or employment within certain fields may be limited by an individual's prior criminal record. Prospective students should check with an admission counselor or appropriate academic department head to determine if such sanctions apply to them.

CLASS SCHEDULE PUBLICATIONS

Class schedules for upcoming terms are made available approximately two to three months prior to the start of the term. Online class schedules are available on the Wake Tech website: http://www.waketech.edu.

The "Wake Tech Curriculum Education Credit Courses Registration Guide" for current and prospective students is available on the Wake Tech website. The guide is also available on the Main Campus, Health Sciences Campus, Adult Education Center, Western Wake Campus, and Northern Wake Campus; at community schools sites; at Wake County libraries; and through most chambers of commerce.

COURSE REGISTRATION INFORMATION

Students who are admitted to a curriculum degree, diploma, or certificate program will receive course planning and registration information from an admissions advisor or an Advising Center advisor. Based on the student's program of study, course planning and registration information after initial enrollment is obtained from a faculty advisor or Advising Center advisor.

Special students (those who have not declared a program of study) are not assigned a faculty advisor, Advising Center advisor, or admissions counselor; however, special students may seek course planning from the Advising Office as needed.

Registration is conducted online via WebAdvisor: http://webadvisor.waketech.edu. Click "Log in" if you are a current student; then select "Search for Sections" or "Search and Register" under the Registration heading. More detailed information is available by clicking on "WebAdvisor's How to's" at the bottom of the page.

Access to the registration system may be blocked if a financial or academic hold has been placed on a student's records. Some classes may require special permission to register from the curriculum dean. Visit Wake Tech's Registration and Student Records Services http://registration.curred.waketech.edu or WebAdvisor at http://webadvisor.waketech.edu for more information.

Your registrations will be deleted if payment is not received by the deadline listed for the period in which you registered. Students are responsible for paying for all scheduled classes by the published due dates. Wake Tech no longer

mails invoices. Payment amounts and deadline dates are available from WebAdvisor. Students are strongly encouraged to pay tuition and fees by credit or debit card at the time of registration to avoid waiting in line for the cashier.

Currently enrolled degree, diploma, and certificate-seeking students are notified of upcoming registration periods through the academic calendar, on the Student Portal, and notices around campus, by faculty advisors, and by email sent to each student's Wake Tech email address. The student is responsible for scheduling an appointment with an advisor.

Course Load
The maximum course load is 20 credit hours per term. To carry more than the maximum load, students pursuing a degree, diploma, or certificate must obtain an electronic override permission from the dean or the dean's designee.

LIMITED ENROLLMENT PROGRAMS

Some Wake Tech programs have more applicants than available space, as follows:

- Air Conditioning, Heating, and Refrigeration Technology
- Associate Degree Nursing
- Automotive Systems Technology
- Basic Law Enforcement Training
- Computed Tomography and
- Cosmetology
- Construction Management Technology
- Magnetic Resonance Imaging Technology
- Dental Assisting
- Dental Hygiene
- Emergency Medical Science
- Medical Assisting
- Medical Laboratory Technology
- Phlebotomy
- Radiography
- Surgical Technology

These “limited enrollment” programs may have unique admission requirements and may use additional criteria, such as postsecondary coursework, related work experience, or professional certification, for selecting applicants. Limited enrollment programs may also have their own policies, procedures, schedules, and deadlines, which are subject to change. Interested applicants should begin by contacting the Admissions Office and talking to an admissions advisor, who will answer initial questions and guide them through the next steps in the process. The advisor will then schedule an interview to further evaluate applicants’ interests and abilities and provide more detailed information about specific programs of study.

CHANGE OF PROGRAM

Any student wishing to change from one curriculum to another must initiate the change through an Advisor at the Main, Northern Wake, Health Sciences, Western Wake, or Public Safety Education Campus. Students receiving VA educational benefits must also file a change of program request (VA form 22-1995) with the College VA certifying official (Financial Aid).

INTERNATIONAL STUDENTS

The International Student Office assists international student applicants who wish to apply for a student (F-1) visa. It also assists F-1 visa students in communicating with Citizenship and Immigration Services (CIS) regarding authorization of application for appropriate employment, extension of I-20 expiration date, transferring an I-20 to another college or university, travel abroad, and re-entry procedures and documentation of F-1 status. In addition, international students may seek advice and referral information on all aspects of living and studying in the United States. All international (F-1) students and other (non-immigrant) visa holders who want to convert to F-1 status are required by CIS regulations to have a current record of local and foreign addresses on file with the college.

READMITTED STUDENTS

Any student who withdraws from the College for reasons other than academic or administrative may be considered for readmission at any subsequent semester. Applicants who have not attended for **two years or more** must submit a new application. A student who has been dismissed for academic or administrative reasons for one semester or more may re-enroll upon approval by the Associate Vice President for Enrollment Services after a review of the student's situation with the division dean. Requests for re-enrollment must be in writing and addressed to the Dean of Students. Readmission and any conditions or restrictions attached to such readmission are at the discretion of the College.

Health Sciences curricula may have readmissions policies that differ from the general policies of the College. These policies will be made available to Health Sciences students in the Student Policy Handbook for each program.

STUDENT COMPLETION

Information about student completion in each of the academic programs is available to students online at http://www.nces.ed.gov/IPEDS/COOL. Other related information available via the ***Wake Tech website*** includes the Critical Success Factors and the Fact Book.

The availability of this information satisfies the federal requirement regarding dissemination of student consumer information.

WE ARE HERE TO HELP!

Locations

Main Campus, 9101 Fayetteville Road (401 South)
Northern Wake Campus, 6600 Louisburg Road
Health Sciences Campus, 2901 Holston Lane
Western Wake Campus, 3434 Kildaire Farm Road
Public Safety Education Campus 321 Chapanoke Road

Curriculum Admissions

Should assistance be needed, please feel free to contact an Admissions Information Specialist at (919) 866-5420 or find information online at http://admissions.waketech.edu

Registration and Student Records Services

Location: Main Campus, Student Services Building, Room 243
Phone: (919) 866-5700

Advising

Phone: (919) 866-5474 or advising@waketech.edu

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

Last updated 12/13/2011

2011-2012 ACADEMIC CALENDAR SUMMARY

Event	Fall 2011 16 Weeks	Fall 2011 1st Mini-mester	Fall 2011 2nd Mini-mester	Spring 2012 16 Weeks	Spring 2012 1st Mini-mester	Spring 2012 2nd Mini-mester	Summer 2012 10 Weeks	Summer 2012 1st 5-Week Session	Summer 2012 2nd 5-Week Session
SEMESTER STARTS	8/17/11	8/17/11	10/19/11	1/4/12	1/4/12	3/12/12	5/16/12	5/16/12	6/21/12
SEMESTER ENDS	12/16/11	10/18/11	12/16/11	5/7/12	2/29/12	5/7/12	7/26/12	6/20/12	7/26/12
Early registration opens Fall 2011	6/1/11	6/1/11	6/1/11	n/a	n/a	n/a	n/a	n/a	n/a
Payment deadline Fall 2011 if registered June 1-Aug. 1	8/1/11	8/1/11	8/1/11	n/a	n/a	n/a	n/a	n/a	n/a
Registration continues Fall 2011	8/2/11	8/2/11	8/2/11	n/a	n/a	n/a	n/a	n/a	n/a
Payment deadline Fall 2011 if registered Aug. 2 –Aug 16	8/16/11	8/16/11	8/1611	n/a	n/a	n/a	n/a	n/a	n/a
Early registration opens Spring 2012	n/a	n/a	n/a	10/24/11	10/24/11	10/24/11	n/a	n/a	n/a
Payment deadline Spring 2012 if registered Oct. 24 – Nov. 17	n/a	n/a	n/a	11/18/11	11/18/11	11/18/11	n/a	n/a	n/a
Registration continues Spring 2012	n/a	n/a	n/a	11/18/11	11/19/11	11/19/11	n/a	n/a	n/a
Payment deadline Spring 2012 if registered Nov. 18 – Dec. 16 if registered Dec. 17 – Jan. 3	n/a n/a	n/a n/a	n/a n/a	12/16/11 1/3/12	12/16/11 1/3/12	12/16/11 1/3/12	n/a n/a	n/a n/a	n/a n/a
Early registration opens Summer 2012	n/a	n/a	n/a	n/a	n/a	n/a	4/4/12	4/4/12	4/4/12
Payment deadline Summer 2012 if registered April 4 – April 30	n/a	n/a	n/a	n/a	n/a	n/a	4/30/12	4/30/12	4/30/12
Registration continues Summer 2012	n/a	n/a	n/a	n/a	n/a	n/a	5/1/12	5/1/12	5/1/12
Payment deadline Summer 2012 if registered May 1 – May 15	n/a	n/a	n/a	n/a	n/a	n/a	5/15/12	5/15/12	5/15/12
Schedule Adjustment Week Begins	8/17/11	8/17/11	8/17/11	1/4/12	1/4/12	1/4/12	5/16/12	5/16/12	5/16/12
Schedule Adjustment Ends	8/23/11	8/23/11	10/20/11	1/10/12	1/10/12	3/13/12	5/20/12	5/17/12	6/22/12
Deadline for dropping with 100% refund	8/16/11	8/16/11	10/18/11	1/3/12	1/3/12	3/11/12	5/15/12	5/15/12	6/20/12
Deadline for dropping with 75% refund (10% point of semester)	8/26/11	8/26/11	10/24/11	1/13/12	1/13/12	3/15/12	5/22/12	5/22/12	6/25/12
Deadline for withdrawing with W grade (60% point of semester)	10/28/11	9/20/11	11/21/11	3/21/12	2/7/12	4/13/12	6/27/12	6/6/12	7/12/12
Mid-term break	10/6/11-10/11/11	10/6/10-10/11/11	n/a	3/1/12-3/11/12	n/a	3/1/12-3/11/12	n/a	n/a	n/a
Other breaks	9/5/11; 11/23/11-11/27/11	9/5/11	11/23/11-11/27/11	1/16/12; 4/6/12-4/8/12	1/16/12	4/6/12-4/8/12	5/26/12-5/28/12; 7/4/12	5/26/12-5/28/12	7/4/12
Exam days	12/12/11-12/16/11	n/a	n/a	5/1/12-5/7/12	n/a	n/a	n/a	n/a	n/a
Grades submitted by faculty on WebAdvisor	12/19/11	10/25/11	12/19/11	5/10/12	3/16/12	5/10/12	7/30/12	6/27/12	7/30/12
Commencement Exercises**	12/10/11 9:00 a.m.	12/10/11 9:00 a.m.	12/10/11 9:00 a.m.	TBA	See Spring 2012	See Spring 2012	See Spring 2012	See Spring 2012	See Spring 2012

Rev: 08/12/11 *Subject to revision to meet changing conditions. Continuing Education schedule may vary. Consult the *Schedule of Classes* for applicable dates and deadlines.

Wake Technical Community College
2011 Critical Success Factors
Eight Performance Measures for Accountability
http://ieandresearch.waketech.edu/index.php?page=publications

1. Progress of Basic Skills Students: (Performance Standard: 75%) (2009-2010)

Total FTE	Total Served in Literacy	Completed a Level or Goal	Progressing Same Level
14,792	8,019	7%	31%

Did Not Meet Goal	Moved to a Higher Level	Composite Progress %
20%	31%	80%

2. Passing Rates on Licensure and Certification Examinations (Performance Standard: 80% Aggregate Passing Rate) (2009-2010)

Total Number of Test Takers	Total Number Passing	Aggregate Institutional Rate	Number of Exams with a Passing Rate Less Than 70%
441	403	91%	0

	Number Tested	Percent Passed
Basic Law Enforcement Training	58	91%
Dental Hygiene	19	79%
Emergency Medical Technician (EMT)		
EMT	214	92%
EMT-I	24	92%
EMT-P	14	100%
Nursing (Registered Nursing)	75	89%
Radiography	31	97%

3. Performance of College Transfer and AAS Students (Performance Standard: 83% ≥ 2.0). Percent of 2008-2009 College Transfer and AAS Students with a GPA of greater than or equal to 2.0 after two semesters at a UNC Institution

FTE	24 or More Semester Hours		Associate Degree Recipients		Total	
	Number	% ≥ 2.0	Number	% ≥ 2.0	Number	% ≥ 2.0
14,792	571	90%	166	94%	737	90%

4. **Passing Rates of Students in Developmental Courses (Performance Standard: 75%) (2009-2010)**

	# Completed	% Passed
Reading	1,043	84%
Math	4,922	71%
English	2,651	74%
Total	8,616	73%

5. **Success Rate of Developmental Students in Subsequent College-Level Courses (Performance Standard: 80% of students who took developmental courses will pass the "gatekeeper" English and/or Mathematics course for which the developmental course serves as a prerequisite) (2009-2010)**

FTE	English		Math		Total	
	Number	% Passed	Number	% Passed	Number	% Passed
14,792	876	86%	739	90%	1,615	88%

6. **Satisfaction of Program Completers and Non-Completers (Performance Standard: 90%) (2009-2010)**

FTE		Number	Percent Satisfied
14,792	**Non-Completers**	196	83%
	Completers	868	98%
	Total	1,064	95%

7. **Curriculum Student Retention, Transfer, and Graduation (Performance Standard: 65% of Fall degree seeking students will either re-enroll, transfer, or graduate by the subsequent Fall) (2009-2010)**

FTE	Total Cohort	% Graduated	% Return	% Transfer	% Graduate, Return, or Transfer
14,792	14,774	9%	53%	9%	70%

8. **Business/Industry Satisfaction with Services Provided (Performance Standard: 90%) (2009-2010)**

FTE	Number of Survey Respondents	Percent Satisfied
14,792	2,947	96%

REGISTRATION AND RECORDS

OFFICIAL COMMUNICATION WITH STUDENTS POLICY

New policies and policy changes will be communicated to students on the official Updates web page, located at http://Updates.waketech.edu.

Every curriculum student is provided with an official Wake Tech email account through the student portal (my.waketech.edu)

- Students must first activate their my.waketech.edu account, wait 24 hours, and then activate the email account.
- This college-issued email account is to be used for all email correspondence with instructors and other college officials.

Official correspondence from the college (communications from instructors, information about registration or financial aid, etc.) will be sent to students' Wake Tech email address **ONLY.** Instructors and college officials may refuse to accept student emails sent from other addresses.

For more information, visit my.waketech.edu and click on "Support". Video tutorials are available in the FAQ/Knowledge Base at http://www2.waketech.edu/lore/studkb/category.php?id=9**.**

TRANSCRIPT REQUESTS

The Wake Tech Registration and Student Records Services Division is responsible for all student records and for the protection of student rights as provided by the Family Education Rights and Privacy Act (FERPA). Transcripts of academic record will be issued only with written authorization by the student.

Official copies of transcripts may be obtained in person, with a photo I.D., at the Registration and Student Records Services Division in room 243A of the Student Services Building. Transcripts may also be requested by mail or fax or made online by downloading an order form at http://registration.curred.waketech.edu/transcripts.php. Mail, fax, and online requests will be processed within 2 business days. One copy of a transcript will be provided per request.

Official Wake Tech transcripts are $5 per copy. Student copies are available at no charge; however, no transcripts will be provided to students with outstanding debt to the College.

ADVANCED STANDING

Advanced standing is a means by which students can satisfy graduation requirements by applying transfer work and credits from placement examination. When it is determined that work from another college is equivalent to a Wake Tech course(s) , students are given an equivalency for the advanced standing work, meaning that it is deemed equivalent to a specified Wake Tech course. However, no academic credit is awarded, and thus the equivalency will not count toward the student's grade point average

Equivalencies will be noted on the official transcript as transferred equivalencies or non-course equivalencies. Equivalencies will be taken into consideration for program completion at Wake Tech only. Acceptance of advanced standing work at one college does not necessarily mean that acceptance will be given at every college. Students are encouraged to review the advanced standing policies at any college for which they may be considering to transfer or enroll.

Advanced Placement (AP) Credit

The College Entrance Examination Board (CEEB) sponsors an advanced placement program that enables high school students to complete college-level courses while still in high school, to demonstrate college-level achievement through examinations, and to receive college course credit when they matriculate to an institution of higher education. The CEEB examinations are offered in the high schools by the Educational Testing Service (ETS).

College Level Examination Program (CLEP) Credit

CLEP is a program that offers the student the opportunity to earn college credit for knowledge acquired outside the conventional classroom. College-level competency may have been acquired through personal reading, formal study, job experience, non-credit course work, television-taped courses, correspondence courses, military training, adult courses, and advanced studies in high school. For information regarding the CLEP Testing Program, contact the College Board at http://www.collegeboard.org/.

Dantes Standardized Subject Tests (DSST)

The DANTES Program (Defense Activity for Nontraditional Education Support) is a testing service conducted by Educational Testing Service (ETS). DANTES, an agency of the Department of Defense, was created to help service members obtain credit for knowledge and skills acquired through nontraditional educational experiences. Since World War II, DANTES has sponsored and administered tests that provide qualified military personnel with the opportunity to obtain academic credit.

DANTES Subject Standardized Tests provide a way for military personnel to obtain credit by examination for knowledge of material commonly taught in college courses.

Curriculum French and Spanish Placement Exams
NOTE: Students who believe their language skills will exempt them from more than one course should take the CLEP exam. For more information on CLEP testing, visit www.collegeboard.com.

The following students **MUST** take the Wake Tech PLACEMENT EXAM to determine the level at which they should continue their foreign language studies:

- Native speakers: Students who received their primary literacy education in French or Spanish.
- Heritage learners: Students who have not received their primary literacy education in French or Spanish. Language skills acquired vary by household and may not include reading and writing skills in the second language.
- Students who have earned a grade of B (87) or better on each of the THREE years of high school study of the same language.
- Students who have lived or have studied in a Spanish or French speaking country.
- Incoming transfer students returning to the study of French or Spanish begun in high school, but not previously pursued at the college level.

Students may take the Language Placement Exam in a given foreign language only once; they may not take the exam if they are currently taking or have taken a foreign language course at Wake Tech. If a student believes his or her placement level is too low or too high, he or she should contact the Foreign Language Department Head. Foreign language faculty reserve the right to request that students take the Language Placement Exam.

Department and Special Course Challenge Examinations
Students seeking credit for non-transferable learning experiences for any course, except College/University Transfer and Pre-Curriculum, may request a challenge examination. Subject matter for which credit is sought must be equivalent to the course(s) being challenged. Challenge examination requests will not be accepted for incomplete or failed course work. Requests must be made with full justification to the appropriate academic dean or designee at the time of registration. Upon approval, the appropriate dean or designee will either direct the student to contact the Individualized Learning Center, on Main Campus, to schedule a time for the examination or contact the dean or department head to schedule the examination. Students who successfully challenge a course will receive credit for the course with a grade of "X" The course will not enter into grade-point average computations, but will count toward the total hours earned.

Students must register and pay tuition for courses to be challenged and must submit requests for challenge examinations after registering for the course(s) to be challenged. In order to get credit on the transcript record, it is necessary to remain registered for a class that has been challenged successfully. ENG 111, 112, 113, and 114, and all other College/University Transfer courses may not be challenged; instead, students may take the appropriate CLEP, AP, or DANTES exam.

Note: French and Spanish native speakers are not eligible to receive credit for 100 level foreign language classes.

Students who think that their language skills will earn them credit for more than one course and want to get as much credit as quickly as possible should take the CLEP exam. For specific information on CLEP testing, please visit the website for http://www.collegeboard.org/.

Students may take the Language Placement Exam in a given foreign language only once. They may not take the test once they are taking or have taken a foreign language course at Wake Tech. If a student believes he/she may have been placed into a too low or high level class, he/she needs to contact Melania Aguirre-Rabon, Foreign Language Department Head, PLM 204H, miaguirr@waketech.edu.

Foreign language faculty reserve the right to request that a student take the Language Placement Exam. in as much as some divisions have adopted more restrictive challenge examination procedures, students should make every effort to start the challenge examination process as soon as they register for the course(s). Students must take all challenge examinations no later than the 10-percent point of the semester or term. Students may obtain information on the results of their examination by inquiring at the Registration and Student Records Services Division. Positive photo identification will be required. Results of challenge examinations will be mailed after the exams have been graded and results forwarded to the Enrollment and Records Services Division.

Most challenge exams are administered within the appropriate department, however, a select number of courses including BUS 110, 121, 137, 147, 153; ENG 101; MAT 070, 080; PSY 101, 110, and 118 may be taken in the Individualized Learning Center (ILC) on main campus. Students challenging these select courses must obtain approval from the Division Dean and

contact the ILC (919-866-5276) to schedule an appointment to take the exam. Both the Division Dean approved form # 610 and student photo identification is required for ILC administered challenge exams.

TRANSFER CREDITS

Transferred Coursework
Wake Tech will consider courses for transfer equivalency, from other colleges or collegiate institutions accredited by a commission whose responsibility is accrediting degree-granting institutions classified as collegiate, and are a commission housed in a regional or national accrediting agency.

Only those courses with a grade of "C" or higher will be considered for transfer. The course must be equivalent in content (and in college/university transfer, credit hours) to a Wake Tech Course. Official transcripts from accredited institutions will be reviewed against established standard equivalencies and transfer equivalency recommended by the appropriate dean or a designee. Decisions about whether transfer equivalency will be allowed, how much will be allowed, and how such transfer equivalency will be applied, are discretionary on the part of the College. In exercising this discretion, the college will apply principles recommended by its regional accredited and national higher education organizations that set standards for transfer credit. These principles focus on the level, content, quality, and comparability of a course, and its relevance to the student's intended program.

It is not necessary for students to request a review of transferred coursework. When official transcripts are received for an applicant in a curriculum program, the transcripts are sent to the Transfer and Non-Course Credit department for initial review against the established standard equivalencies. Any courses that are not found in the standard equivalencies database are forwarded to the Registrar and/or curriculum deans for review and decision. Recommended equivalencies are given and noted on the student's academic record.
Please note that a granted equivalency does not mean it satisfies a graduation or program requirement. It simply means that the course is equivalent to a Wake Tech course. Whether or not the granted equivalency can be used for graduation or program requirements will depend on its listing as a requirement on the curriculum schedule for the specific program (major) in which the student is enrolled at the time of admission to the College. If a student changes programs (major), the student should request a transcript re-evaluation to determine if the change has an impact on her/his graduation or program requirements.

Some programs may also have a time limit on transferability of selected courses. The academic dean has the option of moving the student to a more current version of the program of study (curriculum schedule).

Students must complete a minimum of 25 percent of hours required for a degree, diploma, or certificate in residence at Wake Technical Community College. Final course work must be completed in residence at Wake Technical Community College.

AARTS (Army/ACE Registry Transcript System)
The AARTS transcript is an American Council on Education approved method of presenting military experience for academic credit. Students possessing an AARTS transcript for military educational experience after 1981 may submit the transcript for credit evaluation in any program except College/University Transfer and Health Sciences. In order to obtain a copy of their AARTS transcript, students may write: Manager, AARTS Operations Center, Ft. Leavenworth, KS 66027-5073.

Carolinas Associated General Contractors Articulation Agreement
Wake Tech will award equivalencies for specific CAGC courses in partial fulfillment of program requirements leading to an Associate in Applied Science degree, diploma, or certificate in Construction Management Technology. The college will award equivalencies after reviewing an official transcript from CAGC.

Certified Professional Secretary® (CPS®) and Certified Administrative Professional® (CAP®) Credentials
Students applying for entry into: Office Administration, Office Administration/Legal, Medical Office Administration, Business Administration, Business Administration/Human Resources Management, and Business Administration/Electronic Commerce will be granted credit for some courses upon proof of having earned the CAP or CPS rating within the past six years. Additional credits in keyboarding, word processing, spreadsheets, databases, business presentations, and computer literacy may be earned at Wake Tech based on the successful completion of challenge exams in these skill areas.

Dental Hygiene Program
Advanced standing is considered for students enrolled in the Dental Hygiene program if they have previously attended a Dental Assisting or Dental Hygiene program accredited by the American Dental Association, Commission on Dental Accreditation (ADA, CDA). Direct credit may be granted or a challenge exam taken for select courses within the program. More specific criteria are noted within the department's student handbook, which is provided once admitted to the program.

Emergency Medical Science Advanced Placement through Certification
Students may receive advanced standing in the EMS prefix classes through certification. Other EMS courses may be challenged by the student based on experience at the discretion of the EMS Department Head. The student must score 78 percent or better to receive challenge credit. Challenges of EMS courses to gain higher certification are not allowed.

Associate Degree Nursing-Advanced Placement Option for LPNs
Associate Degree Nursing-Advanced Placement Option awards eligible licensed practical nurses 21 credit hours toward the Associate Degree in Nursing. Applicants must meet all standard admission requirements for the Associate Degree Nursing program and must have completed BIO 168, BIO 169, BIO 155, ENG 111, PSY 150, and PSY 241 to be considered for admission.

FEES & PAYMENT

Effective August 1, 2011
Note: Tuition may be increased.

Class Tuition & Fees
The State Board of Community Colleges establishes tuition annually; and the Wake Technical Community College Board of Trustees establishes special fees associated with some classes. Tuition and fees are listed below and are subject to change without notice.

All tuition and fees are due by the published payment due dates. Students may pay:

1. **BY WEB** at https://webadvisor.waketech.edu. System maintenance occurs between 1 a.m. and 5 a.m. daily. During these times, the system may not be available.
2. **BY DROP BOX** located in front of the Cashier's Office at the Wake Tech main campus, Holding Hall, 9101 Fayetteville Road, Raleigh, NC 27603
3. **BY MAIL** to the Cashier's Office, Wake Technical Community College, 9101 Fayetteville Road, Raleigh, NC 27603
4. **IN PERSON** at the Cashier's Office at the Main Campus, Health Sciences Campus, Northern Wake Campus, or Western Wake Campus

Payments may be made using personal check, debit card, credit card (Mastercard or Visa) or cash. If you choose to pay by personal check, it is suggested that each student bring two checks to registration: one for registration and one for the purchase of books and supplies. Textbooks are purchased by students as they are needed. Costs of textbooks vary, depending upon the curriculum in which the student is enrolled.

All rates are subject to change by action of the North Carolina Legislature (tuition) and the Wake Technical Community College Board of Trustees (fees).

Tuition
North Carolina Students
16 credit hours or more $ 1064.00 /term
Less than 16 credit hrs. $66.50 /credit hr.

Out-of-State Students
16 credit hours or more $4,136.00 /term
Less than 16 credit hrs. $258.50 /credit hr.

Fees
Fees are established by the Trustees of the College and are subject to change without notice.

Application Fee
Wake Technical Community College does not charge any type of application fee with the exception of International Students, which are charged a $30 dollar application fee.

Student Activity Fee
$20.00 per term*
*includes $10.00 Student Athletics Fee per term

Campus Access Fee
$5.00 per term for registrations at Main, Health, Western Wake, Northern Wake, or Public Safety Education Campuses

Computer Use/Technology Fee
$1.00 per credit hour per term ($16.00 maximum)

Professional Liability Insurance
$6.00 per term for Health Sciences Students
$6.00 per term for Cosmetology and Esthetics Students

Graduation Fee (Due When Registering For Final Term)
$35.00 for Diploma/Degree Student
*No charge for Certificate Programs

Official Transcript Fee
$5.00 each per request

Facility Fee – Community Schools
A Facility Fee of $25 per class will be charged to students attending classes at community schools locations. Fees will be collected by Wake Technical Community College at time of registration. Community school fees are established by the Wake County Public School System and are subject to change without notice.

Facility Fees -- Ice Skating, Bowling and Golf
Facility fees are charged to students registering for the following classes:
PED 177 - $85.00
PED 139 - $80.00
PED 128 - $40.00

Facility Fees -- State Personnel Development Center (SPDC)
A lab facility fee of $25.00 per course is charged to students attending classes at the State Personnel Development Center (101 W. Peace Street, Raleigh, NC).

Audits
Registration and tuition charges are the same as for courses taken for credit. Audit classes earn neither credit hour nor quality points. ***Requests to audit must be submitted to the Office of the Registrar by the last day of registration***.

Self-Supporting Registration Fees
The fee for self-supporting classes, denoted by an "S" at the end of the section number, is $76.50 per credit hour. There are no rate differences for in-state and out-of-state students and no waivers for senior citizens, dual enrollment students, staff, etc. No maximum cost based on a maximum number of credit hours, applies to self-supporting classes. For example, if you registered for 16 credit hours as an in-state student at the regular tuition rate, the tuition amount due would be $904. If you added a three-credit-hour class at the self-supporting rate, your tuition would be $904 plus $229.50 for the self-supporting registration fee.

Returned Checks and Unpaid Accounts
Any student who has a returned check shall be notified by certified letter. If the returned check is not cleared within the specified time, all academic records will be frozen until the account is cleared. Students who develop a pattern of payment by returned checks will have this payment option revoked. Once identified, these individuals will be required to pay by cash, money order, certified check or credit card. Our bank is authorized to present NSF checks for payment a second time which may result in additional fees being assessed.

Unpaid student accounts, including returned checks and unpaid parking tickets, will prevent graduation, granting of credit, or release of transcript.

Senior Citizen Tuition Waiver
A legal resident of North Carolina who is at least 65 years old may register for curriculum classes at no cost up to six credit hours for any fall, spring, or summer term. Senior citizens will also be expected to pay all regularly-assessed special fees for any course in which they enroll.

REFUND POLICY

Curriculum Classes
Refunds are processed under the North Carolina Community College System (state) refund policy.

Tuition refunds are automatically processed based on deadlines and drop dates and are mailed to the student address on file in the College's records. Therefore, it is very important that students submit address changes to the Registration and Student Records Services Division as soon as they occur.

Refund checks are only written after the 10% date in the term. Checks are mailed from the Accounting Office within four (4) weeks after the 10% date. This date is published in all class schedules and registration information each term. All refunds are paid by check.

Tuition
Tuition is charged on a per-credit-hour basis up to a maximum of 16 credit hours per term. There is no additional tuition charge for registration in excess of maximum credit hours. Students will be eligible for refunds when course drops or withdrawals result in enrollment for less than maximum credit hours and meet the applicable conditions described below.

Regular-schedule classes that begin the first week (seven calendar days) of the semester:

1. A **100% refund** shall be made if the student drops the class prior to the first day of the academic semester as published on the College calendar.
2. A **75% refund** shall be made if the student drops the class on or after the first day of the semester and prior to or on the official **10%** point of the semester, as published in the College calendar.

Classes that begin at times other than the first week (seven calendar days) of the term:

1. A **100% refund** shall be made if the student drops the class prior to the first class meeting.
2. A **75% refund** shall be made if the student drops the class prior to or on the **10%** point of the class.
3. To comply with applicable federal regulations regarding refunds, federal regulations supersede the state refund regulations stated in this Rule.
4. For a class(es) which the college collects receipts which are not required to be deposited into the State Treasury account, the college shall adopt local refund policies.

Cancelled Classes
A **100% refund** shall be made if the class in which the student is officially registered is cancelled by the College.

Military Tuition
Upon request of the student, the college shall grant a full refund of tuition and fees to military reserve and National Guard personnel called to active duty or active duty personnel who have received temporary or permanent reassignments as a result of military operations then taking place outside the state of North Carolina that make it impossible for them to complete their course requirements.

Registration Fee-Self-Supporting Classes
The registration fee for self-supporting classes is charged separately from (in addition to) the tuition charges. Therefore, refunds for these classes are also calculated separately. Otherwise, the policies and deadlines listed prior also apply to self-supporting classes.

To be eligible for a refund a student must officially drop the class, using WebAdvisor or via the Registration Change Request form if the registration system has closed for the term, by the deadlines indicated.

Fees
When the student withdraws entirely and the tuition refund is approved by the College as set forth above, student activity, community schools, and graduation fees will be refunded in total.

Death of a Student
In the event of a student's death, all tuition and fees the student had paid for that term may be refunded to the estate of the deceased.

Books
Books will be accepted for full refund when the student withdraws from the College or drops a class on or before the **10% point** in the semester, provided the books have not been marked in or otherwise defaced. Requests for book refunds are to be presented with the sales receipt by the student by the **10% point** in the semester to the Bookstore Manager, who is authorized to accept or reject the request for refund. Website: http://bookstore.waketech.edu

REGISTRATION AND RECORDS

REGISTRATION DATES

Students begin registering at different times, depending on their status as (1) degree-seeking, certificate-seeking, or diploma-seeking , (2) newly admitted, (3) special students (non-degree seeking), or (4) high school dual enrollment/early admission. Registration windows and other important dates are located on the Registration Calendar located at the end of the admissions chapter or at ***http://calendars.waketech.edu***.

For a general overview of important dates for the academic year, please see the Academic Calendar at the end of the admission chapter. Please note that this calendar is subject to change, and the calendar's web address should be viewed for the final calendar dates.

RESIDENCY CLASSIFICATION

To qualify for in-state tuition, a legal resident must have maintained his or her domicile in North Carolina for at least the 12 months immediately prior to his or her classification as a resident for tuition purposes. To be eligible for such classification, the individual must establish that his or her presence in the state during such 12-month period was for the purpose of maintaining a bona fide domicile rather than for purposes of mere temporary residency incident to education.

Aliens are subject to the same considerations as U.S. citizens in the determination of residency status for tuition purposes, except that holders of B, C, D, F, J, M, P, Q, or S visas may not be considered residents for tuition purposes and their dependent relatives are not eligible for a tuition rate less than the out-of-state rate. Holders of E, H, L, O, or R visas may (under certain circumstances) be eligible for the in-state tuition rate.

Regulations concerning residency classification for tuition purposes are set forth in detail in *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes*. Each enrolled student is responsible for knowing the contents of this Manual, which is the controlling administrative statement of policy on this subject. Copies of the Manual are available for student inspection in the Registration and Student Records Services Division.

North Carolina Residency Forms
Residence and Tuition Status Application or http://forms.waketech.edu/ss/427ncresapp.pdf
- Attachment A: Visa Information or http://forms.waketech.edu/ss/427Ancres-visa.doc
- Attachment B: Parent or Spouse of Student or http://forms.waketech.edu/ss/427Bncres-sup.doc

Determination of student resident status for tuition purposes:

1. Upon applying for admission to the College, each prospective student is classified as a resident or non-resident of North Carolina for tuition purposes, according to the student's declaration at the time of application.

2. In the case of an individual who is originally classified as non-resident and later requests reclassification to resident status, the individual will be asked to complete a "Residency and Tuition Status Application." Along with the completed application, two proofs must be provided support a claim for in-state status. Additional forms may be needed if the student is not a naturalized citizen of the United States. These forms are available on the College's website. Registrar staff will review the application, make a determination about residency status, and advise the individual in writing of the decision.

Procedures for Hearing Appeals

In the event that an individual disagrees with the Assistant Registrar's ruling on his/her residency status, the ruling may be appealed to the College Residency Committee, which has been established by the President of Wake Technical Community College. The appeal must be made in writing to the Vice President of Student Services.

REGISTRATION AND RECORDS

WE ARE HERE TO HELP!

Locations

Main Campus, 9101 Fayetteville Road (401 South)
Northern Wake Campus, 6600 Louisburg Road
Health Sciences Campus, 2901 Holston Lane
Western Wake Campus, 3434 Kildaire Farm Road
Public Safety Education Campus 321 Chapanoke Road

Curriculum Admissions

Should assistance be needed, please feel free to contact an Admissions Information Specialist at (919) 866-5420 or find information online at http://admissions.waketech.edu

Registration and Student Records Services

Location: Main Campus, Student Services Building, Room 243
Phone: (919) 866-5700

Advising

Phone: (919) 866-5474 or advising@waketech.edu

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

FINANCIAL AID

The Wake Tech Financial Aid program exists to ensure that no qualified student will be denied the opportunity to continue his or her education because of economic disadvantages. Through a program of scholarships, grants, work-study, and loans, students enrolled at the College are able to supplement their own resources and those of their families to complete a course of study. For detailed information on financial aid programs offered at Wake Technical Community College, and how they are distributed, refer to the publication available in the Financial Aid Office or online at http://financialaid.waketech.edu.

FINANCIAL AID APPLICATION

To apply for financial aid you must complete the Free Application for Federal Student Aid (FAFSA) online at www.fafsa.gov. The FAFSA should be completed as soon as possible after January 1 for the upcoming academic year, using your/your parents' prior year's federal tax information. If you prefer not to complete the application online you may call the Central Processing Center (1-800-433-3243) and request a paper application.

DEADLINE & "PRIORITY" DATES

IF YOU PLAN TO ENROLL:	**FAFSA** must be completed online by:	All required paperwork must be submitted to the Financial Aid Office by:
Fall Semester	May 1	June 1
Spring Semester	October 1	November 1
Summer Term	April 1	April 15

Note: If the date listed above falls on a weekend or holiday, the paperwork is due the next business day.
Once your eligibility for financial aid has been determined you will receive an award letter with information about the disbursement of funds.

If your eligibility for financial aid has not been determined or your file is not complete by the dates listed above, you will be responsible for payment of your tuition, fees, and bookstore charges.

Student Responsibilities

To receive Federal Title IV assistance and state assistance:

- You must demonstrate financial need.
- You must have a high school diploma or a General Education Development (GED) certificate on file with the College.
- You must be enrolled at least half time (6 credit hours) in an eligible program of study.
- You must be a U.S. citizen or an eligible non-citizen.
- You must have a valid Social Security number.
- You must maintain satisfactory academic progress.
- You must sign a statement on the FAFSA certifying that federal student aid will be used for educational purposes only
- You must sign a statement on the FAFSA certifying that you are not in default on a federal student loan and that you do not owe money back on a federal student grant.
- You must answer a question on the FAFSA about whether you have been convicted of possessing or selling illegal drugs.
- You must register with Selective Service, if required.

GRANTS

Wake Technical Community College offers several different federal and state grant programs. Grants are gifts of financial aid and as such do not generally have to be repaid as long as a student remains enrolled each semester. Students who withdraw completely may be required to repay a portion of federal grant funds received.

Federal Grant Programs

Federal Pell Grants

Student must be a U.S. citizen or permanent resident enrolled in an eligible program; demonstrate financial need, and meet all other eligibility requirements. Students must complete the Free Application for Federal Student Aid (FAFSA).

For 2011-2012, annual awards range from $555-$5550. The maximum PELL-eligible Estimated Family Contribution (EFC) is 5273, with a minimum award for a full-time student of $555. The award range may change if Congress does not approve maximum funding for the PELL Grant program.

Federal Supplemental Educational Opportunity Grants (FSEOG)
To be considered, students must be PELL-eligible and must have an EFC of zero. Students who submit the FAFSA by March 15 (and all supplemental paperwork by May 1) will receive priority consideration. Due to limited funding, the maximum award at Wake Tech is $800 per academic year. Awards will be reduced for students enrolled less than half-time.

Federal Work Study Program
Federal work study provides part-time employment opportunities to students in need of financial assistance. Students generally work 10-15 hours per week. Awards are based on available funding. Student must complete the FAFSA in order to be considered for this grant and must demonstrate financial need.

Student must be enrolled at least half-time in an eligible diploma or associate degree program and must maintain satisfactory academic progress to qualify for work study. Federal Work Study Earnings are paid on a monthly basis after a time record has been signed, approved, and processed by the Financial Aid Office.

State of North Carolina Grant Programs

North Carolina Community College Grant Program (NCCCG)
Student must complete the FAFSA to be considered for this grant and must be a North Carolina resident enrolled for at least six (6) credit hours in an eligible curriculum program. Student must have an EFC within the range determined by the state of North Carolina each academic year. Student must meet all eligibility requirements for a Federal PELL grant. Students who have already earned a bachelor's degree are not eligible.

North Carolina Education Lottery Scholarship (NCELS)
Student must complete the FAFSA to be considered for this grant and must be a North Carolina resident enrolled for at least six (6) credit hours in an eligible program of study. Student must meet all eligibility requirements of a Federal PELL grant. Students who have already earned a bachelor's degree are not eligible.

LOANS
A loan is money received that must be repaid to the lender.

Beginning with the 2009-2010 school year, Wake Technical Community College will participate in the William D. Ford Federal Direct Loan Program, which means that students will no longer choose lenders. All loans will be funded by the U.S. Treasury. For more detailed information, please visit our website http://financialaid.waketech.edu/index.php and select 'Loans".

William D. Ford Federal Direct Loan Program

Direct Subsidized Loan
To qualify for these loans, students must demonstrate financial need as a result of filing the FAFSA. Eligibility for this loan is determined by the institution, but funds are provided by the U.S. Treasury and repayments collected by agencies designated by the U.S. Department of Education. The amount that may be borrowed per year is set by the federal government and ranges from $3,500 to $5,500 for undergraduates, depending on grade level. Interest on this loan is paid by the government while the student is enrolled on at least a half-time basis. The student becomes responsible for the interest and principal payments six months after graduating or dropping below half-time enrollment.

Direct Unsubsidized Loan
The difference between this loan and the Direct Subsidized Loan is that this loan is not need-based, and students are charged interest from the date the loan funds are disbursed. Students must complete a FAFSA to qualify for a Direct Unsubsidized Loan, even though eligibility is not based on need but on the cost of attendance minus other expected financial aid. Annual maximums, interest rates, and repayment provisions are the same as those of Direct Subsidized Loans.

Direct Loan for Parents
Parents of a dependent undergraduate student may apply for a PLUS loan to help meet the student's costs of attendance not covered by other financial aid. Interest rates and repayment provisions on PLUS loans are generally more favorable than other consumer loans available for educational expenses. Completion of a FAFSA is required and parents must submit a PLUS Request form to the Financial Aid Office for certification of the student's cost of attendance, as well as other anticipated financial aid. Repayment generally starts when funds are disbursed; however, deferments are available upon request.

North Carolina Loan Programs

Loan Program for Health, Science, and Mathematics
In an effort to encourage and provide financial assistance to North Carolinians desiring career opportunities in the health, science, and mathematics disciplines, the General Assembly makes appropriations available for loans for the programs cited below:

Health: Allied Health; Health Sciences

Science: Computer and Information Science, Engineering and related technologies, Life Sciences, and Physical Science

Mathematics: Mathematics (General, Pure, and Applied)

North Carolina Community College Loan Program
The North Carolina Community College System Office makes allocations to each community college for short-term loans to assist students who demonstrate financial need. Each community college administers the Loan Program according to its policies and procedures.

North Carolina Community College Loan Program Application (Emergency Loan)
The North Carolina Community College (NCCC) Loan Program provides limited, interest-free, short-term funds to students who meet the eligibility requirements below. Funds may be used during registration for the payment of tuition and fees or the purchase of books and supplies. The maximum loan amount is $500 per academic year. The academic year includes fall, spring, and summer. Students are limited to one loan per academic year.

Loan applications must be received by 5 p.m. on Tuesday. Loan proceeds checks are written once a week, on Thursdays, and are available for approved applicants to pick up (with picture ID) from the Main Campus Cashier's Office after 4 p.m.

To be eligible, a student must:

- Be admitted to a curriculum program and enrolled in at least six (6) credit hours
- Submitted the Free Application for Federal Student Aid (FAFSA) and be approved for financial aid for the term that the loan is requested
- Meet all other eligibility requirements for federal financial aid
- Submit documentation for loans $300 or more
- Cannot owe a prior term balance

Students are limited to one emergency loan per academic year, regardless of the fact that you may not have borrowed the maximum limit.

SCHOLARSHIPS

The Wake Tech Foundation offers a variety of merit- and financial need-based scholarships for students at Wake Technical Community College. Scholarship applications will be available in the spring of each academic year in the financial aid office and online at https://foundation.waketech.edu/scholarshipappinstructions.

Merit-based scholarships are awarded at department and division levels. Students interested in these scholarships should contact their department head or dean to discuss the nomination process. Students are strongly encouraged to apply for scholarships to help offset the rising cost of education.

FINANCIAL AID REFUNDS AND REPAYMENTS

After your financial aid has paid your tuition, fees, and book charges, any balance that remains in your account will be refunded to you. Refund checks are generally mailed 30 days after the last day of the schedule adjustment period. The check disbursement schedule for 2011-2012 will be posted on the website (http://financialaid.waketech.edu) by July 1, 2011.

Title IV Repayment
A student who receives Title IV financial aid funds and subsequently withdraws from school (officially or unofficially) before the 60 percent point of a given semester or term may be required to repay Pell Grant, SEOG, or Direct Loan Program funds. Such repayments are determined by criteria established by the U.S. Secretary of Education. Financial aid is intended for educational expenses only, within a specified enrollment period; once a student is no longer enrolled at least half time he/she cannot use the funds.

If a student uses Title IV financial aid funds to register for a class, decides not to attend the class, yet fails to drop the class, thereby canceling their registration, the College must refund all tuition and fees to the applicable financial aid program – and the student must then repay the College for these expenses. If the student also purchased books and supplies for the class, they must be returned to the bookstore. Students who do not complete these tasks will be responsible for all charges, and if they fail to pay the charges a hold will be placed on their school records.

If You Withdraw
It is imperative that you cancel your registration for any class you decide not to attend. This is especially important if you have been awarded financial aid, because your financial aid award holds your classes and prevents you from being automatically dropped for nonpayment. It is your responsibility to cancel your registration.

If you are considering withdrawing from Wake Technical Community College, we strongly urge you to speak to a Financial Aid Counselor to determine how withdrawing may affect you.

ENROLLMENT STATUS (for financial aid)

For financial aid purposes, full time enrollment is always considered twelve credit hours, regardless of whether the student is enrolled in the fall, spring, and/or summer semester. Students receiving veteran's benefits should contact their Wake Tech VA representative.

Enrollment requirements for financial aid programs are listed below:

In order to receive the maximum Pell Grant, a student must be enrolled for 12 credit hours or more each semester in an eligible curriculum of study. Depending on eligibility a reduced Pell Grant can be received by students who are enrolled three-fourths time (9-11 credit hours), one-half time (6-8 credit hours), or less than half-time (1-5 credit hours). Only courses in your program of study can be included when determining your award for the semester. For example, if you are enrolled for twelve credit hours but you are taking a five credit hour course that is not part of your program of study, you will receive PELL Grant funds for seven credit hours only and not twelve credit hours although you are enrolled for twelve hours.

- In order to receive funding from the North Carolina Community College Grant or the North Carolina Education Lottery Scholarship students must be enrolled **at least halftime**.
- In order to receive funding from the Direct Loan Program students must maintain continuous enrollment in **at least six credit hours.**

FINANCIAL AID FOR STUDENTS WITH DISABILITIES

Vocational Rehabilitation is a public service program operated through the Division of Vocational Rehabilitation, Department of Human Resources. Vocational Rehabilitation offers several financial resources to assist individuals with disabilities. Students may be eligible for financial assistance to complete a course of study to meet individualized needs. Prospective students should contact the nearest Division of Vocational Rehabilitation Services office.

SATISFACTORY ACADEMIC PROGRESS POLICY

Satisfactory Academic Progress Policy (*For Financial Aid Recipients*)
Effective for Semesters of Enrollment beginning July 1, 2011 and thereafter

Federal regulations require schools to monitor the academic progress of each student who applies for financial aid and to certify that each student applicant is making satisfactory academic progress toward a degree, diploma, or certificate. Federal regulations require schools to establish Standards of Satisfactory Academic Progress (SAP) that include qualitative and quantitative measures of progress and a timeframe for completion of a program of study.

These standards are applied to students who receive financial aid from any of the following programs: Federal Pell Grant, Federal Supplemental Education Opportunity Grant, North Carolina Community College Grant, North Carolina Education Lottery Scholarship, North Carolina Student Incentive Grant, Federal Direct Subsidized and Unsubsidized Loans, Federal Direct PLUS loans, and institutional grants, scholarships and loans. Students' academic performance is evaluated at the end of each semester of enrollment. Any student not meeting the minimum standards outlined below will be given financial aid warning status and notified by email from the Financial Aid Office. The student must meet the minimum requirements by the end of the financial aid warning semester; if not, financial aid will be terminated until the standards are met.

Note: Pre-curriculum courses do not count toward completion of a degree and are therefore not used in calculating cumulative GPA or cumulative completion rate to determine Satisfactory Academic Progress for financial aid recipients.

Qualitative: Cumulative Grade Point Average (GPA) Requirement
In accordance with federal regulations, a student's cumulative GPA must be reviewed at the end of each semester of attendance, including summer.

1. Students must have earned a cumulative 2.0 GPA when grades are reviewed at the end of the semester.
2. Students who do not earn the required cumulative 2.0 GPA will be placed on financial aid warning for their next semester of attendance.
3. While on financial aid warning, the student remains eligible for financial aid:

    a. If the student earns a cumulative 2.0 GPA (or higher) by the end of the financial aid warning semester, the warning will be lifted (provided the student meets all other SAP guidelines).
    b. If the student does **not** earn a cumulative 2.0 GPA by the end of the financial aid warning semester, financial aid will be terminated. The student will not qualify for financial aid effective the next semester of attendance until such time as the student again meets all SAP guidelines.

Quantitative: Completion Rate Requirement
In accordance with federal regulations, students must successfully complete at least 67% of cumulative credits attempted in order to meet the requirements for financial aid. For example, if a student has attempted 60 credit hours during enrollment, he/she must successfully complete 40 or more of those hours. Student completion rates are reviewed at the end of each semester of attendance, including summer.

1. Students must earn a cumulative 67% completion rate. Grades are reviewed at the end of each semester.
2. Students who do not earn a cumulative 67% completion rate will be placed on financial aid warning for their next semester of attendance.
3. While on financial aid warning, the student remains eligible for financial aid:
    a. If the student completes sufficient credits to earn a 67% completion rate by the end of the financial aid warning semester, the warning will be lifted (provided the student meets all other SAP guidelines).
    b. If the student does **not** complete sufficient credits to earn a 67% completion rate by the end of the financial aid warning semester, financial aid will be terminated. The student will not qualify for financial aid effective the next semester of attendance until such time as the student again meets all SAP guidelines.

Maximum Time Frame
The maximum time frame within which to complete a degree (or other program of study) is 150% of the published length of the program. For example, if the published length of a program of study is 64 semester hours, a student may attempt up to 96 semester hours (64 x 150% = 96). To determine the published length of a program, please refer to the Wake Technical Community College Academic Catalog.

Appeals
Students may appeal the termination of their financial aid eligibility in the event of documented extenuating circumstances, such as illness or injury of the student or the death of an immediate family member. The appeal must address why the student failed to make satisfactory progress and what has changed in the student's situation that will allow the student to demonstrate satisfactory academic progress in the future. Appeals must be submitted in writing to the Financial Aid Office and addressed to the director. The Satisfactory Academic Progress Appeals Committee will review the appeal and notify the student in writing regarding the status of the appeal. Students are limited to two termination appeals requests while attending Wake Tech. All requests for appeals must be submitted according to the following timetable:

- Fall semester appeals must be submitted by August 1.
- Spring semester appeals must be submitted by December 1.
- Summer semester appeals must be submitted by May 1.

If the date indicated above falls on a weekend or holiday, the appeal is due the next business day.

Students whose appeals have been approved will be placed on financial aid probation for their next semester of attendance. The student will, in conjunction with the SAP committee, develop an individualized academic plan that must be followed in order to continue enrollment. The plan may include requirements for academic performance, meetings with an academic advisor, or Wake Tech counseling services. Students who meet these requirements will continue to be on probation for the next semester, and a new academic plan will be developed. Continued eligibility for financial aid is contingent on meeting the requirements of each semester's academic plan. Financial aid probation status will not end until the student successfully establishes a cumulative 2.0 GPA and 67% completion rate. Failure to meet the requirements of the academic plan will result in termination of financial aid the next semester of attendance.

Treatment of Selected Grades

Withdrawals: Credit hours in which a student receives a grade of "W", "WP", and "F" are included in the number of hours attempted but do not count toward successfully completed hours; consequently, students who withdraw may have difficulty meeting the satisfactory progress requirements.

Incompletes: Students will not be affected by "incompletes" at the time of the review.

Transfer Credit: Students transferring from another institution will be considered making satisfactory progress at the time of enrollment. A student's maximum timeframe for receiving financial aid will be reduced by the number of transferred credit hours applied towards his/her program of study at Wake Tech.

Audits: An audit (AU) grade is not considered attempted coursework. It is not included in the determination of grade point average or completion rate. A student cannot receive financial aid for an audited course.

Credit by examination: Credit hours earned by examination are considered attempted and completed coursework and therefore **will** be considered in calculating a student's completion rate. Financial aid does not pay for credit hours earned by examination.

Repeated course: In accordance with Wake Tech policy, a student is permitted to repeat any course twice. The last grade earned is calculated in the GPA. For financial aid purposes, the previous hours attempted and earned will continue to be counted in the student's cumulative hours attempted and earned.

Summer terms: Credit hours attempted and earned during summer term will be included in the calculation of satisfactory academic progress, just as those earned during any other enrollment period.

Successful completion: A grade of A, B, C, D, X, or P is considered successful course completion. A grade of F is not considered a successful completion.

Eligibility Status

Satisfactory: Students who have met the criteria explained above, cumulative GPA of 2.0 and cumulative completion rate of 67%, have satisfactory status.

Financial Aid Warning: Students who have not earned the required GPA or completion rate will be placed on financial aid warning for the following semester. Satisfactory academic progress will be monitored at the end of each semester to determine if the student meets the standards of progress and is eligible to continue to receive financial aid.

Financial Aid Termination: Students on financial aid warning status who have not successfully earned a cumulative GPA of 2.0 and cumulative completion rate of 67% at the conclusion of the warning period will have their financial aid terminated. Financial aid will also be terminated for students who have attempted the maximum allowable credit hours for their program of study.

Financial Aid Probation: Students whose appeals have been approved by the Satisfactory Academic Progress Appeals Committee are placed on financial aid probation.

Notification of Financial Aid Termination or Warning: The Financial Aid Office will send an email to any student who is placed on financial aid warning or terminated; however, failure to receive correspondence does not negate a termination or warning status.

Regaining Eligibility: Students who continue to attend school without federal financial aid may regain eligibility for financial aid by earning a cumulative GPA of 2.0 and a cumulative completion rate of 67%. A student may request reconsideration of eligibility for financial aid by submitting a written request to the Financial Aid Office once all requirements are met.

A student who exceeds the maximum allowable time frame for completing a program of study may appeal by using a student petition. The student must provide a graduation plan signed by his/her academic advisor; if the plan is deemed reasonable, the student will receive financial aid on a probationary basis for one or more semesters until the degree is completed.

Petition of Waiver of Satisfactory Academic Progress Standards: Students who have been disqualified from receiving financial aid may request a waiver of the satisfactory progress requirements by submitting a Satisfactory Academic Progress Appeals Form, if extenuating circumstances have affected academic performance. The circumstances must be explained

and documented in writing and submitted to the Satisfactory Academic Progress Appeals Committee. Extenuating circumstances may include but are not limited to illness or injury of the student or an immediate family member, death of a family member, and full-time employment. If the student's financial aid is reinstated, the student is expected to meet the satisfactory academic progress standards by the end of the semester. All appeals are reviewed by the SAP Appeals Committee, and the decision of the Committee is final. Appeals are not retroactive; they are approved for the current semester only. The Committee is composed of the Financial Aid Director, the College Registrar, an Academic Counselor, and a faculty member.

Returning students are evaluated on a continuing basis from the last enrollment, unless an extenuating circumstance is considered. Returning students who enrolled under an earlier academic progress policy will be required to meet the standards of the current policy upon returning.

Complete academic record: To measure a student's satisfactory progress toward degree, diploma, or certificate requirements, the student's complete academic record at Wake Tech must be evaluated, whether or not the student received aid for the entire time of enrollment. Any course grades of W or WF that were forgiven by Wake Tech must be included in a student's cumulative record when determining satisfactory academic progress standards. When students complete coursework for more than one major, academic progress standards for each major must be met to receive student aid. Please note that satisfactory academic progress warning status or termination status can be changed only by successfully completing classes – it is not enough to sit out a semester. The status remains until you earn both a cumulative GPA of 2.0 and a cumulative completion rate of 67%. You must meet both criteria to be considered in good standing for financial aid.

The person designated by Wake Technical Community College to provide financial aid information to students is the Financial Aid Director or her designee. Office hours: 8 a.m.-7 p.m., Monday-Thursday, and 8 a.m.-4 p.m. on Friday.

VETERAN AFFAIRS (VA)

Website: http://veterans.waketech.edu

Most Wake Tech programs are approved for the training of veterans, Ready Reservists, North Carolina National Guard members, and the spouses and children of deceased or 100-percent disabled veterans. Veterans who wish to use the education benefits of the G.I. Bill must first establish their eligibility with the Department of Veterans Affairs (VA) by submitting a Form 22-1990, Application for VA Education Benefits, or by applying online at www.gibill.va.gov. Veterans separated from service within the last ten years who hold an Honorable Discharge usually qualify for the education benefits, which provide, in general, 36 months of full-time training.

Veterans who have served on active duty on or after September 11, 2001, may be eligible for Post 9/11 GI Bill benefits. Benefits are payable for training on or after August 1, 2009. More information about these benefits are available at www.gibill.va.gov.

Certain military personnel on active duty are also eligible for education benefits under the G.I. Bill. Interested persons should contact their duty station Education Officer for details before applying for admission to the College.

Veterans attending Wake Tech under the G.I. Bill receive a monthly reimbursement from the Department of Veterans Affairs. The reimbursement is based on course load; for example, a veteran carrying a half-time load would receive half the benefit. To receive the full benefit, the veteran must be enrolled for at least 12 credit hours. Veterans should contact the College VA certifying official, located in the Financial Aid Office, for more information.

Veterans are afforded the same rights as any Wake Tech student and must meet the same academic requirements and standards. Veterans will not be certified for VA benefits until all entrance/admissions criteria, including official high school and college transcripts, if applicable, are on file. Transfer credit granted from prior college experience must also be on file. Veterans must meet the grade-point average (GPA) standards established in Wake Tech's Academic Probation and Suspension policy. A veteran failing to meet GPA standards at the end of a term will be placed on academic probation. A veteran failing to meet those standards at the end of the next term in attendance will have his enrollment certification to the VA terminated. Certification of enrollment to the VA will not be restored until GPA standards are met, and then only upon request by the veteran.

Veterans dropped from a course by the College for violating the attendance policy will be immediately reported to the VA, and appropriate adjustments will be made in G.I. Bill payments.

Enrollment of Veterans in Non-Traditional Courses

Veterans receiving VA education benefits may enroll in non-traditional courses (including telecourses, Internet and videocassette courses, independent studies, and others) provided that:

- The course or courses are required by their current program of study.
- The veteran has passed any previous non-traditional courses attempted.

All remedial work indicated by placement testing has been completed.

- The veteran has met with the VA certifying official to discuss policies and procedures before registering for a course.
- The veteran has reviewed the Distance Education Student Self-Assessment on the Wake Tech website (or in the schedule of classes) to determine if suited for distance learning.

There is no additional charge for enrolling in non-traditional courses.
For more information about veterans' educational benefits, visit http://veterans.waketech.edu

TRANSFER STUDENTS SEEKING FINANCIAL AID

Any student who transfers to Wake Technical Community College from any other school beyond high school must provide official transcripts from all schools attended, including high school. The transcripts must be evaluated by Wake Technical Community College before there can be an offer of financial aid or certification of eligibility for Veterans education benefits.

WE ARE HERE TO HELP!

Locations

Main Campus
9101 Fayetteville Rd. (401 South), Raleigh
Student Services Bldg Room 015
Monday-Thursday 8:00 am - 7:00 pm
***Friday 8:00 am - 4:00 pm (**Limited services offered**)

Health Sciences Campus
2901 Holston Ln., Raleigh
SSC Room 04, Thursday 08:00 am - 5:00 pm

Western Wake Campus Millpond Village
3434 Kildaire Farm Rd., Cary
Room 255, Tuesday 10:00 am - 12:00 pm

Northern Wake Campus
6600 Louisburg Rd. (401 North), Raleigh
231 Administration Building
Monday – Thursday 8:00 am - 5:00 pm
***Wednesday- **extended hours until 7:00 pm**
***Friday 8:00 am – 4:00 pm (**Limited services offered in Building A, Room 218E**)

Public Safety Education Campus
321 Chapanoke Rd., Raleigh
Room 1714, Monday 1:00 - 3:00 pm

Main Campus Phone Number
919-866-5410

Websites
Please visit http://waketech.financialaidtv.com/, which contains several videos that explain various financial aid topics and concerns or visit the Financial Aid's main website, http://financialaid.waketech.edu

Financial Aid Application
www.fafsa.ed.gov

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

ACADEMIC RECOGNITION

President's List
The College publishes a "President's List" at the end of each academic term. The list is composed of students who have achieved a grade-point average of 4.0 at the end of that particular term based on a minimum of 12 credit hours attempted in the Fall and Spring semesters; a minimum of 8 credit hours must be attempted for the Summer term.

Dean's List
The College publishes a "Dean's List" at the end of each academic term. The list is composed of students who have achieved a minimum grade-point average of 3.50 at the end of that particular term based on a minimum of 12 credit hours attempted in the Fall and Spring semesters; a minimum of 8 credit hours must be attempted for the Summer term.

President's Award for Excellence
The President's Award for Excellence is the top academic award presented by Wake Technical Community College. This award recognizes students who excel in academic achievement, attitude, attendance, and motivation.

Six students (one from each academic division) are selected to receive the President's Award for Excellence during each calendar year. Division deans and instructors select award recipients.

Each recipient receives a personal plaque of commendation, presented by the College President. Recipients' names are engraved on a trophy that is permanently displayed in the College's trophy case.

Who's Who Among Students In American Junior Colleges
Each spring, second-year students are nominated for Who's Who Among Students in American Junior Colleges based upon the student's scholarship ability; participation and leadership in academic and extracurricular activities; citizenship and service to the College; and potential for future achievement.

ATTENDANCE POLICY

Absences from class are a serious deterrent to good scholarship. The College, therefore, stresses regular class attendance, but recognizes that students should have an opportunity to develop personal responsibility and should have some discretion in attendance to meet the demands imposed by other responsibilities. Students anticipating absences should notify their instructor in advance. If prior notification is not possible, the student should contact the instructor immediately upon returning to the College to determine the next course of action.

Students are expected to be in attendance at least 90 percent of all scheduled class hours. In the event that a student's absences in a class exceed 10 percent and the absences are not justified to the satisfaction of the instructor, the instructor will submit Student Course Withdrawal Form to the Financial Aid Office or to the email drop box designated for withdrawals to document the last date of attendance. An absence is defined as missing one-third or more of any regularly schedule class meeting.

Students are also expected to arrive to class on time and stay for the entire class period; arriving late or leaving early disrupts the learning environment. Because even the most conscientious students occasionally experience extenuating circumstances, classroom doors will not be locked to enforce this policy, although doors may be locked for security or pedagogical reasons. Doors will be opened for tardy students. A pattern of tardiness and/or early departure will have consequences. Tardies and early departures will be considered part of students' attendance violations. Tardies and early departures not justified to the satisfaction of the instructor will be equated to absences at a rate of one absence per two tardies and/or early departures. Students should see course syllabi or other course documentation for specific details.

Student Course Withdrawals received for students with a last day of attendance prior to or on the 60-percent point of the term will result in a grade of "W."

Student Course Withdrawals received for students with a last day of attendance after the 60-percent point of the term will result in a grade of "WF" or "WP" as indicated by the faculty. A grade of "WF" indicates that the student was failing at the time of withdrawal and will count the same as an "F" grade in the grade-point average calculation. A grade of "WP" indicates that the student was passing at the time of withdrawal and will count the same as a "W" grade in the grade-point average calculation.

Accommodating Absences Due To Religious Observances
Wake Tech recognizes its legal and ethical responsibilities to accommodate students who must miss classes to participate in religious observances. North Carolina law requires that students be permitted at least two excused absences per year for these purposes. Wake Tech students are allowed up to two class days of excused absences per academic year for religious observances.

It is the student's responsibility to contact the instructor for each course in which work will be missed. The student must provide written notification to the instructor within the first two weeks of the semester, identifying the religious observance and date of the planned absence.

Faculty members must provide a suitable accommodation for affected students. Specific accommodations may vary, depending on course content, mode of instruction, and size of class.

Examples of suitable accommodations include but are not limited to:

- Establishing a class policy allowing all students to drop one exam or assignment grade;
- Providing an opportunity for a makeup exam or equivalent assignment;
- Allowing extra-credit assignments to substitute for missed class work; and
- Other reasonable accommodations determined by the course instructor.

Students are responsible for missed class content. Students must request and should be provided with any instructional materials given out during their absence.

ADD, AUDIT & WITHDRAWAL POLICIES

Adds
A student may change his registration by adding a course through the last day to add, as published in the academic calendar. A student who finds it necessary to add a course should confer with his advisor. Adds may be completed via WebAdvisor until the end of the published registration period. Adds after the registration systems close must be submitted in person to the Registration and Student Records Services Division on a completed Request for Registration Override form signed by the dean.

Drops
A student may change his registration by dropping a course prior to the 10% (subject to change) date of the semester/term. A student who finds it necessary to drop a course should confer with his advisor. Drops may be completed via WebAdvisor until the end of the published registration period.

Drops after the 10% date of the semester/term and on or prior to the 60% point of terms are considered withdrawals and must be submitted to the Registration and Student Records Services Division on a Student Course Withdrawal form. A drop during this time frame will result in a grade of “W.”

A student who drops a class is advised that this may affect his financial aid. Financial aid students may contact the Financial Aid office to determine whether funds will be affected.

Audits
Registration (including tuition charges) for courses to be audited is the same as for courses to be taken for credit. Audit courses carry no credit hours and earn no grade points. The student must submit a Request to Audit form to the Registration and Student Records Services Division no later than the last day to add. Departmental approval to audit is not required to audit at this point.

Students who would like to be considered for audit after the last day to add must obtain the signature of the instructor and dean or dean’s designee on the Request to Audit form before submitting it to the Registration and Student Records Services Division. Audit requests will not be accepted after the mid-point of the term.

Withdrawal Policy
A student who finds it necessary to withdraw from a course(s) or the College must complete a Student Course Withdrawal Form. The form must be presented to the instructor of each course from which the student is withdrawing. The instructor must note the student's last date of attendance on the form. The student must also obtain signatures of Financial Aid staff or Veterans' Affairs staff if receiving financial aid or veterans' benefits. The student should then submit the completed form to the Registration and Student Records Services Division for grade processing. Students taking online courses need to send an e-mail to the instructor of each course declaring the student’s intent to withdraw. The instructor will then submit the necessary information to the Registration and Student Records Services Division.

When the student's last date of attendance is on, or prior to, the 60% point of the term, the student will receive a grade of "W." A grade of "W" does not affect the grade-point average. Withdrawal forms should be submitted to Registration and Student Records Service Division within two weeks after the last date of attendance instead of being held until the end of the semester.

When the Withdrawal Form is submitted after the 60% point of the term, the student will receive a grade of "WF" or "WP" as indicated by the course instructor. A grade of "WF" indicates that the student was failing at the time of the withdrawal and will

count the same as an "F" grade in the grade-point average calculation. A grade of "WP" indicates that the student was passing at the time of the withdrawal and will count the same as a "W" grade in the grade-point average calculation.

Students enrolled in courses offered at times other than the standard sixteen-week semester and the regular summer term should consult the Curriculum Education Credit Class Schedules booklet to determine the last day to withdraw and receive a grade of "W. "

Medical Leave Protocol
Students requesting to withdrawal from classes for medical reasons will be referred to the Vice President of Curriculum Education.

ENROLLMENT STATUS

A **full-time student** is a person enrolled for twelve or more semester hours of credit in the fall or spring semesters and nine or more semester hours of credit in the summer term.

A **part-time student** is a person enrolled for less than twelve semester hours of credit pursuing a degree, diploma, or certificate program in the fall or spring semesters and less than nine semester hours of credit in the summer term.

A **special student** is any student who is enrolled in a credit course, but is not working toward a degree, diploma, or certificate.

For financial aid purposes only, full-time status is 12 hours credit or more each semester.

GRADES

Students are graded according to the following grade-point system in all courses, **except** Pre-Curriculum.

GRADE POINTS

Grade	Per Credit	Explanation
A	4	Excellent
B	3	Very Good
C	2	Satisfactory
D	1	Poor
F	0	Failing
W	0	Withdrawal (prior to 60%)
WF	0	Withdrawal – Failing (after 60%)
WP	0	Withdrawal – Passing (after 60%)

Students in **Pre-Curriculum** courses are graded according to the following system.

Grade	Explanation
A	Excellent
B	Very Good
C	Satisfactory
F	Failing
W	Withdrawal (prior to 60%)
WF	Withdrawal – Failing (after 60%)
WP	Withdrawal – Passing (after 60%)

The following grades will **not** be used in computing the grade-point average.

Grade	Explanation
AU	Audit
FG	Forgiven
I	Incomplete
IP	In Progress (Pre-Curriculum and Multi-entry/multi-exit classes only)
NA	Never Attended
P	Pass (Cooperative Education Only)
W	Withdrew
WP	Withdrew Passing (after 60%)
T	Transfer Credit
X	Credit by Examination

A grade of Incomplete (I) will be given only when circumstances justify additional time for the completion of a course. An Incomplete must be removed by the end of the fifth full academic week of the term immediately following that in which the

Incomplete was incurred. If it is not removed by this date, the Incomplete will be recorded as an "F" in the student's permanent record.

The grade awarded for participation in Cooperative Education will be either "P" (Pass) or "F" (Fail). These grades are not used in computing the grade-point average. Grades are available online approximately two business days after the deadline for faculty to submit final grades. To view grades, access WebAdvisor. Click on Current Students and select Grades under Academic Profile. Grades are mailed at the end of the semester only to students who complete a Request for Official Grade Mailer. Information regarding grade appeals is listed within the Student Rights and Responsibility policy.

Computation of Grade-Point Average
The following process is used to determine a student's grade-point average (GPA):

1. Multiply the number of semester hour credits assigned a course by the number of grade points for the grade received.
2. Add all the grade points together.
3. Divide the total grade points by the total number of semester hours attempted including grades of "F" and "WF."
4. Whenever a course is repeated, beginning Fall 2006, the best grade (except when the repeat results in a grade of I, IP, NA, W, AU, or X) will be used in the grade-point average computation.

Example of Grade-Point Average Computation

Subject	Hours Credit	Grade Received	Per Semester Hour	Grade Points
English	3	A	4	12
Physics	3	D	1	3
Economics	3	B	3	9
Chemistry	5	F	0	0
Psychology	3	C	2	6
Total	17			30

Thirty grade points divided by 17 hours attempted equals a 1.76 grade-point average for work attempted in this example. A GPA of 2.0 constitutes a "C" average. Hours attempted and grade points earned in previous terms should be included in the above procedures to determine the cumulative grade-point average.

Course Repetition
A student may repeat any course twice; each attempt will be recorded on the student's official academic record. The best grade earned in all the attempts is calculated in the GPA. The dean responsible for the supervision of the course being taken may approve exceptions to this policy.

Grade Posting By Faculty
The Family Policy Compliance Office (FPCO), which is responsible for the administration of the Family Educational Rights and Privacy Act (FERPA) at schools and colleges, has issued a technical letter stating that grades may not be posted by Social Security Number (SSN), or part thereof, without the written consent of the student.

Wake Tech faculty are neither required to post grades nor prohibited from posting them; however, faculty may post grades only for those students who have given their written consent. Even with student consent, full social security numbers must never be used as identifiers.

Faculty should distribute **FERPA Consent to Post Grades** forms to students in classes for which they intend to post grades. The consent forms should be turned in to the faculty member's dean with the final grade report and maintained for no less than three years. After three years, grade report records may be destroyed provided no litigation, claim, audit, or other official action involving the records has been initiated. If any official action has been initiated, the records should be destroyed in office after the official action is complete and attendant issues resolved. (Item 45550, Records Retention and Disposition Schedule Amendment, as amended August 1, 2002).

For faculty posting grades electronically on Blackboard, written consent is **not** required provided a student's grade is posted where **only the student** can access it with a secure password (i.e., individual grade books). Faculty **may not** post grades on

a Blackboard site to which all class members have access; such an action would constitute the disclosure of personally identifiable information without student consent.

Faculty **may** send grades to individual students via email only when there is written authorization from the student on file. Authorization should be maintained by the instructor and College registrar; WebAdvisor will be the official means of final grade notification.

Grade Forgiveness
A student who has not been enrolled in curriculum courses in the College for 60 consecutive months (five years) or longer may submit a Grade Forgiveness request to the Registration and Student Records Services Division. Under this policy, the student may request that previous grades of "WF" or "F" not be used in calculating the cumulative grade point average. A grade of FG will replace the original grade on the transcript: however, the FG grade is not included in the GPA. This ruling has no bearing on any other institutions or how they calculate GPA.

Prior to re-evaluation for grade forgiveness, the student must be re-admitted to the college, register for courses, and complete at least 12 credit hours of course work at the 100 level or above, with a minimum quality point average of 2.0. Requests for re-evaluation are processed weekly, and the student will be notified in writing at the mailing address on file. A student may request grade forgiveness only once while at Wake Tech.

Satisfactory Academic Progress
At the end of each academic term, students' semester and cumulative grade point averages (GPAs) are calculated. Each student is expected to make satisfactory progress, defined as a cumulative GPA of at least 2.0, based on credit hours attempted. Students with the minimum cumulative GPA are considered to be in good standing.

Credit hours for pre-curriculum courses are not counted in credit hours attempted; thus, grades from pre-curriculum classes are not counted toward cumulative GPA. Likewise, courses with a grade of NA (never attended), AU (audit), X (challenged), W (withdrawn), or WP (withdrawal passing) are not considered in credit hours attempted and are not counted toward cumulative GPA.

Academic Standing Levels

Warning
If the cumulative GPA of a student is below 2.0 at the end of his or her initial semester, when final grades are submitted to the Registrar, the student will be placed on academic warning. Students who have been placed on academic warning will receive e-mail notification from Student Services at their college-issued address. Students on academic warning will be encouraged to consult with a Student Services advisor or faculty advisor within the first ten days of the semester to learn about available academic and counseling services.

Probation
If the cumulative GPA of a student who is already on academic warning remains below 2.0 at the end of the semester, when final grades are submitted to the Registrar, he or she will be placed on academic probation. Students who have been placed on academic probation will receive e-mail notification from the Vice Presidents of Curriculum Services and Student Services at their college-issued address.

Students on academic probation will have a restriction placed on their record by the Registrar to prevent access or continued access to the registration system and will be required to meet with a Student Services advisor or counselor to develop an Academic Success Contract. Depending on the student's major, the advisor should release the restriction to restore the student's access to the registration system once the Academic Success Contract has been created and signed by the student.

Suspension
If the cumulative GPA of a student who is already on academic probation remains below 2.0 at the end of the semester, when final grades are submitted to the Registrar, he or she will be placed on academic suspension. Students who have been placed on academic suspension will receive e-mail notification from the Vice Presidents of Curriculum Services and Student Services at their college-issued address.

Suspension means that students are blocked from registering for classes and may not remain in any classes for which they have pre-registered. The Registrar will drop registration for suspended students when the notifications are sent. The Registrar will authorize a refund of any tuition and fees paid. The Financial Aid Director will cancel financial aid for the term. Students on academic suspension are not allowed to participate in college functions, including but not limited to athletics, student activities, and clubs; or to use college facilities, such as the student lounge, etc. As non-enrolled students, they are considered visitors and must abide by college rules for visitors.

Appeal Process for Students on Academic Suspension
Students on academic suspension may request an appeal in order to continue their enrollment by submitting an Appeal of Academic Suspension form to the Registrar. The appeal will be considered by the Academic Standing Review Committee if the student's transcript shows that while the cumulative GPA of 2.0 has not been achieved, significant progress has been made. Significant progress would mean a minimum 2.0 GPA for the most current term and/or a grade of C or better in all pre-curriculum courses for the current term. Appeal decisions will be sent to the student's Wake Tech e-mail address.

After the student has met with a Student Services advisor, counselor, or faculty advisor to develop an Academic Success Contract, the advisor will release the restriction to restore the student's access to the registration system. Students should understand that course availability may be limited, and that there should be no expectation of availability of the courses from which they may have been dropped. A student who fails to adhere to the conditions specified on the Academic Success Contract, at any point during the semester, will have his registration deleted. Students who have been granted an appeal are not eligible to participate in intercollegiate athletics, as the primary goal is to improve academic performance.

Reinstatement Process for Students Not Appealing Academic Suspension
Students who choose not to appeal their academic standing may request reinstatement for a future term (after sitting out one term of suspension) by submitting a Reinstatement Request to the Registrar. In order for reinstatement to be considered, students must attend a required Student Success Workshop sponsored by the Counseling Services department. Requests for reinstatement must be received one month prior to the start date of the term for which the student wants to re-enroll. Requests will be reviewed by the Academic Standing Review Committee. The student will be notified via e-mail of the committee's decision and any conditions related to the re-enrollment.

Satisfactory Progress in Health Sciences Curricula
Certain policies pertaining to student progress in the Health Sciences curricula differ from general College policies. These policies will be given to each student enrolled in a Health Sciences curriculum.

Satisfactory Progress in Pre-Curriculum Courses
The objective of the pre-curriculum program is to assist students in obtaining the academic skills they need to succeed in a curriculum program. Therefore, a student taking required pre-curriculum courses must earn a grade of "C" or better to progress to a curriculum program or to the next level in a pre-curriculum course. A grade of "F" requires the student to repeat the course.

Graduation Requirements
To be eligible for graduation, a student must complete all prescribed courses for the curriculum in which he or she is enrolled. Students must have a cumulative GPA of 2.0 in their program of study. Grade-point average is calculated by dividing the total number of grade points earned by the total number of credit hours attempted. Courses used in this calculation are those completed at Wake Technical Community College and listed in the student's curriculum outline as "minimum requirements," along with any additional courses approved by the appropriate academic dean.

Students must complete a minimum of 25 percent of hours required for a degree, diploma, or certificate in residence at Wake Technical Community College. Final coursework must be completed in residence at Wake Technical Community College.

In order to graduate, each student must fulfill all financial obligations to the College, including graduation fees. Graduation fees are to be paid during registration for the term in which the graduation requirements will be completed.

Note: Students pursuing a degree or diploma are not usually eligible to receive a certificate in the same program. Requests for exceptions will be considered when a specific and immediate need exists for purposes of employment or promotion. Students pursuing a degree or diploma who find it necessary to scale back their objective to a certificate should contact the Enrollment and Records Services Division to determine if they are eligible to do so.

GRADUATION

Graduation exercises are held at the end of spring term for all students who have completed degree or diploma requirements since the last graduation. Prospective graduates must request a graduation clearance by submitting an "Application for Graduation" form to the Registration and Student Records Services Division. The deadline for submitting this application is the last day of registration of the term in which the student will complete the requirements for the degree, diploma, or certificate.

Potential Summer graduates who will enroll in their final coursework are allowed to participate in the May graduation ceremony. They must request a graduation clearance by submitting an "Application for Graduation" form to the Registration and Student Records Services Division by the last day of registration for the Spring term.

Persistence Toward Graduation
Information concerning the rate of persistence toward graduation for Wake Technical Community College may be obtained from a member of the counseling staff.

POLICY CHANGES

Any statement in the Wake Tech Catalog is subject to change by the College.

New policies and upcoming policy changes will be communicated to students on the official Updates Web page, located at http://Updates.waketech.edu and via their assigned my.waketech.edu.

Students are provided an email address upon acceptance and enrollment to the College. Should they choose not to receive communication via e-mail, they must refer to the official Updates Web page for information.

PRE-CURRICULUM

The Pre-Curriculum program is designed to prepare students for college-level coursework by helping them develop the reading, English, and mathematics skills required for entry into curriculum courses. Any person who has a high school diploma or a GED may enroll in pre-curriculum courses. The number of courses and the time required to complete them will vary. Some students may need only one course, while others may take several semesters to complete a series of courses.

Students are placed in pre-curriculum courses on the basis of their admissions test scores, the recommendation of their advisor or instructor, or their own voluntary selection. Students who require pre-curriculum courses in more than one discipline will be required to take a study skills course, ACA 090. This course has been designed to improve pre-curriculum students' success in both pre-curriculum and curriculum courses. Depending on individual circumstances and pending advisor approval, students may take pre-curriculum and curriculum courses during the same term. Most pre-curriculum courses are offered every term, both day and evening. A student taking required pre-curriculum courses must earn a grade of "C" or better on a seven-point scale to progress to the curriculum program or next pre-curriculum course level. A grade of "F" requires the student to repeat the course.

Pre-Curriculum Courses:
ENG 070, ENG 080, ENG 090, RED 070, RED 080, RED 090, MAT 050, MAT 060, MAT 070, MAT 080, and ACA 090

PREREQUISITES

Some courses may have pre-requisite or co-requisite course requirements, which ensure that the student is ready to move on to a higher level course. All students are required to successfully complete the course prerequisites and co-requisites listed before enrolling. Students who do not have confirmed prior credit, equivalency via placement test scores, or transfer equivalency that satisfies the stated prerequisites and co-requisites may be administratively dropped from the course. Course prerequisites and co-requisites may be found by clicking on the course number on WebAdvisor course schedules.

As this information is public and available, students who drop on their own or due to a faculty-requested drop after the first day of class and before the published 10% date, are only eligible for a 75% refund. Therefore, students are advised to review course prerequisites and co-requisites carefully before enrolling.

SECURITY OF STUDENT RECORDS

Annual Notice To Students Of Their Rights Under The Family Educational Rights And Privacy Act Of 1974
Annually, Wake Technical Community College informs students through the publication of the Student Handbook of the Family Educational Rights and Privacy Act of 1974, as amended. This act, with which the College intends to comply fully, protects the privacy of educational records, establishes the rights of students to inspect and review their educational records, and provides guidelines for the correction of inaccurate or misleading data through informal and formal hearings. To the extent consistent with the Act, students who seek the correction of inaccurate or misleading data or who otherwise have complaints should follow the grievance procedure contained in this Handbook. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office concerning alleged failures by the College to comply with the Act.

Wake Technical Community College's policy establishing its intent to comply with the Act is published in the College catalog. Procedures implementing the provisions of the Act are published in the Student Handbook. Questions concerning the Act and Wake Technical Community College's policy should be referred to the Enrollment and Records Services Division.

Care of Records:

Policies and Procedures
Wake Technical Community College, in the execution of its responsibilities to students, maintains accurate and confidential student records. The College staff recognizes the rights of students to have access to their educational and personal records in accordance with College policy and the Family Educational Rights and Privacy Act of 1974.

Definition of Term "Educational Records"
The term "educational record" as defined under the provisions of the Act include files, documents, and other materials that contain information directly related to students and that are maintained by an educational institution or an authority on behalf of the institution.

The term "educational record," under the provision of the act, does not include the following:

1. Records of institutional, supervisory, and administrative personnel that are in the sole possession of the maker and that are not accessible or revealed to any other person except a substitute for the above named personnel.
2. Records and documents of security officers of the institution that are kept apart from such educational records.
3. Records on students that are made or maintained by a physician, psychiatrist, psychologist, counselor, or other recognized professionals or paraprofessionals acting in their official capacity and that are made, maintained, or used only in connection with a provision for treatment of the student and not available to anyone other than persons providing such treatment, except that such records can be personally reviewed by a physician or other appropriate professional of a given student's choice.
4. Alumni or former student records.

Students may not review or inspect:

1. Financial records of the parents of the students or other information therein contained.
2. Confidential recommendations if a given student has signed a waiver of the student's rights of access, provided that such a waiver may not be required of the student.

Control Provisions on Student Records and Student Information
The official student file shall not be sent outside the Admissions Office, Registration and Student Records Services Division, Financial Aid Office, Placement Office, or Cooperative Education Office except in circumstances specifically authorized in writing by the President or appropriate vice president.

Students have the right to inspect their own records covered by the Act whether recorded in hard copy, electronic data processing media, or microfilm. The Registrar has been designated by the College to coordinate the Inspection and Review Procedures for Student Education Records. Requests to review records must be made in writing, specifying the item or items of interest. Records will be made available for review within forty-five (45) days. Upon inspection, students are entitled to an explanation of any information contained in the record.

Students may have copies of their records except:

1. When a financial "hold" exists.
2. When the copy requested is a transcript of an original or source document that exists elsewhere.

A fee of $.50 per page will be charged for copies of records other than the student's transcript(s) of academic records.

Transcripts and other information, except as provided by the Act, are released only with the written consent of the student. Such written consent must:

1. Specify the records or the data to be released, to whom it is to be released, and the reason(s) for release.
2. Be signed and dated by the student.

Disclosure of Information Without the Student's Consent
Educational records will be disclosed without written consent of students to properly identified and authorized representatives of the Comptroller General of the United States; the Secretary of Education; state educational officials; and the Department of Veterans Affairs, for audit and evaluation of federal and state-supported programs, or in connection with enforcement of the federal or legal requirements that relate to such programs. Routine requests for student data from agencies such as the Department of Education, OEO, research agencies, and state-reporting agencies may be honored without prior approval of the student only in formats where students are not identified.

Confidential information requested by other than federal or state agencies as specified above will be released only under the following conditions:

1. An official order of a court of competent jurisdiction.
2. Subpoena. (Students will be notified immediately by registered mail that their records are being subpoenaed.)
3. To parents of students upon the parent providing a certified copy of the parent's most recent Federal Income Tax Form in which the student is identified as a dependent.

Requests for confidential information will be honored without prior consent of the student in connection with an emergency, if the knowledge of such information by appropriate persons is necessary (in view of a responsible person) to protect the health or safety of the student or other persons.

Faculty and administrative officers of the College who demonstrate a legitimate educational need will be permitted to look at the official student record for a particular student.

The College may make the following "Directory Information" available to the public unless the student notifies the Registrar in writing by the end of the first week of the term that such information is not to be made available.

1. Student's name
2. Date of birth
3. Email address
4. Physical Address
5. Major field of study or program
6. Dates of enrollment
7. Degrees, Diplomas, or Certificates received
8. College honors

Any release of student information for public use or use by the media except that specified above must have prior written approval by the student(s) involved.

Record of Who Has Access
A record of access to the official student record will be maintained within the record itself. This record will show the name, address, date, and purpose of the person who has been granted access. All persons who have access will be included in this record except those institutional employees who, because of the nature of their duties, have been granted access.

Student's Rights to Question Contents of Official Records
A student has the right to view his official records maintained by the College. Furthermore, a student may question any inaccurate or misleading information and request correction or deletion of that data from the official records.
All such requests will be sent to the Registrar and will become a part of that student's record.

All requests for correction of a student record will be acted upon within 45 days of receipt of that request. If the custodian can verify that such data is, in fact, in error, appropriate corrections will be made and the student will be notified in writing when the correction has been completed. In the event the Registrar fails to resolve the student's requests to the student's satisfaction, the student may continue the grievance through compliance with the grievance procedure contained in this Handbook. If the outcome of the grievance is in agreement with the student's request, the student will be permitted to review his record to verify that the change has been made correctly. If the student's request is denied, he will be permitted to append a statement to the record in question, showing the basis for his disagreement with the denial. Such appendages will become a permanent part of the record.

WE ARE HERE TO HELP!

Location
Main Campus
9101 Fayetteville Rd. (401 South)
Holding Hall Room 124
Monday-Thursday from 8 am -7 pm
Friday from 8 am- 4 pm

Phone
919-866-5700

Website
http://registration.curred.waketech.edu/

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

STUDENT SERVICES

Role, Vision, Values, and Goals

Our role is to contribute to the mission of the College by partnering with other academic and administrative units to provide professional, creative, accessible, and high-quality services.

To fulfill that role, Student Services will seek to create an environment that is caring and positive for students; practice and champion cultural sensitivity and inclusiveness; provide coordinated services that are student-focused and technologically up to date; and respond positively to change.

Our vision is to eliminate barriers and create opportunities that enable all students to experience success. Our actions are guided by these values:

- The well-being of all students
- Innovation in problem solving
- The positive affirmation of student achievement
- Professionalism and ethical behavior
- Cooperative and collaborative efforts that include enthusiasm, respect, and humor

To accomplish our mission, Student Services has established the following goals:

1. Increase retention and completion rates of students.
2. Develop capacity to deliver services to all campus sites.
3. Increase the number and percentage of Wake County Public School students enrolled at Wake Tech.
4. Improve the performance of pre-curriculum students compared to that of non-pre-curriculum students.
5. Institute data-driven analysis for planning and decision-making.
6. Improve attitudes toward and participation in student activities and services.
7. Increase new student enrollment at Wake Tech, overall and in specified programs.

ACADEMIC SUPPORT & OPPORTUNITIES

Academic Advisement

The purpose of the faculty advising system is to help provide the most effective, helpful educational environment possible. Every curriculum student enrolled in an Associate of Applied Science degree is assigned a faculty advisor. Students in the A.A. or A.S. College/University Transfer programs are assigned to Student Services advisors that work with College/University transfer students. Initially all other students who place into Pre-Curriculum courses will see a Student Services advisor; after the first semester, they will see their assigned faculty advisor. Advisors are available to students through regularly scheduled office hours to counsel students with any questions or concerns they may have.

Students have the responsibility for planning their programs of study with the help of their faculty advisor. This involves (1) keeping up to date with College and division curriculum requirements; (2) keeping informed of academic deadlines and changes in academic policies; and (3) consulting with the faculty advisor at each pre-registration period and at other times as needed.

Bookstore

Website: http://bookstore.waketech.edu
Students are encouraged to take advantage of online ordering and home delivery.

Students may purchase from the College Bookstore necessary books, software, computer and general supplies, and other items such as stationery, class rings, and pins. Book buy back available for all books with market value at any time during the semester regardless of the source of purchase.

Locations and Hours

Main Campus
8 a.m.-7 p.m., Monday-Thursday
8 a.m.-3 p.m., Friday
Special hours of operation are posted on the bookstore door as needed.

Northern Wake Campus
8 a.m. -2 p.m., Monday-Thursday
8 a.m. -12 p.m., Friday

In addition, both bookstores will open from 5:30 p.m. – 6:30 p.m. every Monday and Tuesday night. A temporary bookstore is located at the Health Sciences Campus at the beginning and end of each semester for approximately two weeks.

Students should be aware of the following operational policies of the Bookstore:

1. Required textbooks for a particular term are available through the drop/add period. Immediately following the tenth academic day of a semester, most of the unsold books are returned to the publishers.

2. Cash refunds for returned books will only be authorized with presentation of the bookstore cash register receipt. Books returned for refund must be new and in undamaged condition containing no writing or marks. Requests for refund for books must be made during the first ten academic days of the semester.

3. A special order for a book may be placed through the bookstore by furnishing the title, author, edition, and publisher of the book. Students may purchase books online at http://bookstore.waketech.edu.

Career Center

The Career Center is a resource for Wake Tech students who want to learn more about the world of work and understand issues and trends related to career success and satisfaction.

Career Center counselors provide guidance to students as they define goals, craft educational programs that reflect those goals, and seek to evaluate and make well-informed decisions about colleges, courses of study, and career possibilities.

The Center maintains a variety of resource materials for students to use, including

- Personalized assessments (in both electronic and hard copy format)
- Reference books, including the Outlook Handbook, ONET, Vocational Biographies, Career Focus series, our Career Resource Guide, and other state and national guides
- Career videos and software
- Occupational and career Internet links
- College catalogs and videos

The Center also offers workshops and classes on exploring and preparing for careers of various kinds.

Locations and Hours

Main Campus: Student Services Building, Room 143a
8 a.m.-5 p.m., Monday-Thursday
8 a.m.-4 p.m., Friday
Evenings by appointment

Northern Wake Campus: Building A, Room 218E
7:30 a.m. – 4:30 p.m., Monday, Tuesday, and Thursday

For More Information
919-866-5460
http://counseling.waketech.edu/career.php

Counseling Services

The Counseling Services Department provides an array of resources and services to support students in clarifying values, interests, and strengths and setting goals.

1. **Career Coaching:** Counselors provide career coaching tailored to students' specific needs, to help them clarify and implement career and life goals; guidance in career planning, using occupational information systems to improve student's understanding of the world of work and enhance their decision-making skills. Counselors also administer career assessments for students who are uncertain about a career or course of study and serve as advisors.
2. **Personal Counseling:** Counselors provide individual, personalized counseling sessions to help students weather relationship difficulties, frustration, stress, loss of motivation, sadness, or a general inability to cope with pressures and problems. The counselors help students develop the skills, attitudes, and understanding to reach their goals and find their place in the world
3. **Referral Services**: Counselors make referrals to off-campus agencies and other resource providers as needed for students facing potential crisis situations.

4. **Academic Success Counseling**: Counselors help students address academic difficulties such as low grades, poor study habits, test anxiety, and balancing college, work, and family; and assist them in general problem solving. Counselors may also refer students to other academic support services on campus as appropriate.
5. **Workshops and Special Events**: Workshops are offered on stress management, test anxiety, time management, career interest and preparation, interpersonal relationships, and practical college survival strategies. The department also sponsors health and wellness events, such as alcohol and domestic violence awareness.

Locations and Hours

Main Campus: Student Services Building, Room 143
8 a.m.-5 p.m., Monday-Thursday
8 a.m.-4 p.m., Friday
Evenings by appointment

Northern Wake Campus, Building A, Room 218
8 a.m.-5 p.m., Tuesday and Wednesday

For More Information
919-866-5460
http://counseling.waketech.edu

Individualized Learning Center (ILC)

Free services are available at Main Campus, Health Science Campus, Northern Wake Campus, Western Wake Campus, Public Safety Education Campus, and on-line for Distance Learning students.

The Individualized Learning Center (ILC) offers study opportunities geared to the academic needs of individual students through the Writing /Study Skills Center, the Foreign Language Help Center, the Math/Computer Center, and the Health Sciences Center:

- One-on-one tutoring
- Online support for distance learning students
- Computer-assisted instruction
- Videocassettes, CDs, DVDs
- Instructor-directed workshops

Any Wake Tech student or employee may use the ILC at his or her convenience. All users must present a valid Wake Tech ID to register and use the timekeeping system.

Admission test preparation (COMPASS, TEAS, and others) is available through independent study or by qualifying for services in the Basic Skills Center. Challenge exams for certain Wake Tech courses are available with proper identification and approval paperwork from the academic department. An independent study, self-paced tutorial program for proficiency in high school level Chemistry can be completed through independent study in the ILC.

ILC CAMPUS LOCATIONS

Main ILC, Room 112 9101 Fayetteville Rd. Raleigh, NC 27603 919-866-5276	Northern Wake Math and Science Bldg., Room 213 6600 Louisburg Rd. Raleigh, NC 27616 919-532-5548	Western Wake Learning Resource Center ILC, 200E 3434 Kildaire Farm Rd. Cary, NC 27518 919-335-1028	Public Safety Education Room 1611 321 Chapanoke Rd. Raleigh, NC 27603 919-866-6100	Health Sciences ILC, HEB 208 2901 Holston Lane Raleigh, NC 27610 919-747-0233

Hours may vary within each skills center. Please call ahead to check availability or check the ILC website, http://ilc.waketech.edu.

English As A Foreign Language (EFL)

Website: http://efl.waketech.edu/

The English as a Foreign Language (EFL) department offers academic English courses for individuals whose native language is not English and who wish to study at the college and university level in the United States. These courses

comprise an intensive English language program that focuses on language for academic purposes; courses are offered on four proficiency levels in grammar, composition, reading, and listening/speaking. See the course descriptions listed as EFL in the course descriptions sections of this catalog for specific course information. This program meets the requirements for those students who have a student visa. Prospective students who wish to obtain a student visa should go to the International Student website at http://efl.waketech.edu. Tuition rates are the same as those for other curriculum classes offered at Wake Tech.

The EFL office is located on the Main campus in the Technical Education Building, Room 109. Prospective students can call 919-866-5325 for more information.

College ID

Students

A college ID card (student photo identification card) will be provided to each registered student. The college ID card must be carried by the student at all times. Students on all campuses which includes, Main, Northern, Health Sciences, Western and Public Safety must obtain a current semester validation sticker that will be affixed to their card (effective Fall 2010). Semester validation stickers can be obtained at various locations on each campus. Locations will be identified as Semester Validation Sticker Check Points.

The card is required for using campus services and attending campus functions and also serves as a library card. Campus security or any college official may ask a student for the college ID card at any time while on campus or at any off-campus activity sponsored by the college. Students without a valid college ID card will be asked to leave campus unless their purpose can be substantiated by a college official. College ID cards can be obtained Monday through Thursday, 8:00 a.m.-5:00 pm., and Fridays, 8:00 a.m.-4:00 p.m. at the Main, Western, Health Sciences and Public Safety campuses. College ID cards can be obtained at the North Campus Monday through Thursday, 8:00 a.m.-7:00 pm., and Fridays, 8:00 a.m.-4:00 p.m. at the Northern campus The College reserves the right to change days and times of availability as needed. The initial college ID card will be free; a duplicate will cost the student $5.00.

Employees and Volunteers

A college ID card will be provided to each employee and volunteer. The college ID card or another name badge must be worn by the employee or volunteer at all times while on any Wake Tech campus or when conducting official Wake Tech business off campus.

Career Readiness and Employment Resources

Website: http://jobplacement.waketech.edu

The Career Readiness and Employment Resources division offers support to students, graduates, and alumni in the development of curriculum-related skills (through experiential education) and job search and success skills.

Cooperative Education (Co-op) is an academic program combining classroom instruction with practical work experience, paid or unpaid, that relates directly to students' curriculum studies. The combination of theory and practice allows students to explore career choices while earning academic credit and even income. Students may access the Co-op link above for additional information and eligibility requirements.

Because of the intrinsic value Cooperative Education has for students, it is a requirement in many technical and vocational curricula at Wake Tech. In some cases, Co-op credit can be applied to satisfy electives and other requirements. (The College reserves the right to add, remove, or alter the Co-op component in any curricula, as needed.)

Student eligibility for a Co-op work assignment is determined by the Coordinator of Cooperative Education, based on the student's prior work experience, academic performance, health/fitness for the assignment, attitude, appearance, and other select criteria, as well as position availability. Every effort is made to find Co-op work experiences for all students; however, placement cannot be guaranteed. If eligible, the student is interviewed by potential Co-op employers. Once a student accepts a Co-op employment position, he or she must satisfactorily complete all orientation sessions, seminars, and assignments in order to graduate; completion will be verified by the student's academic advisor or the Coordinator of Cooperative Education. Co-op courses completed for one program may not count toward the completion of another program.

The Cooperative Education program is designed to be as flexible as possible, to accommodate individual career plans. Students may choose part-time, full-time, or other work arrangements for their Co-op experience, depending on employers' needs.

As its name suggests, Cooperative Education involves the cooperation of Wake Technical Community College, Wake Tech students, and participating employers. The program, therefore, has guidelines and procedures to which all parties must adhere. The benefits of cooperative education are numerous:

Benefits to Student

- Relates theory to practice and helps improve students' academic motivation
- Creates an opportunity to learn and apply job skills (preparing a resume, networking, interview skills, etc.)
- Helps the student develop and enhance interpersonal skills
- Provides professional experience prior to graduation as well as post-graduation employment opportunities
- Paid Co-op positions provide income for students. (Note: some Co-op positions are unpaid.)

Benefits to Employer

- Provides a cost-effective resource for recruitment as well as access to a diverse pool of potential employees
- Results in lower training costs for those students who are later hired as regular employees
- Enhances college relations and provides employers with a unique opportunity to have input into the curriculum.

Wake Tech began offering its students the benefits of Cooperative Education in 1966 and was the first community college in North Carolina to do so. Students who participate in Co-op enter the highly-competitive job market with several months of work experience in addition to their diploma or degree. Experience may provide a decided advantage in the search for employment.

Employment Resources at Wake Tech (which include assistance with the development of important job search skills and access to information on employment opportunities) are for curriculum education students seeking full-time employment upon graduation and for those seeking part-time, temporary employment while enrolled at the college. Services are also available to alumni of curriculum education programs for five years following graduation. The Career Readiness and Employment Resources division coordinates all on-campus employer and military recruiting as well as managing job boards for part-time and full-time employment, internships, and Cooperative Education opportunities. Each curriculum program offered at Wake Tech is actively engaged in the development of relationships with employers and the creation of job opportunities for students and alumni.

The College does not guarantee employment to any student or employees to any employer. Services are offered at no charge to employers or to students and alumni.

Libraries

Wake Technical Community College operates five libraries, as well as providing student resources through a library website at http://library.waketech.edu

Each library location offers the following services and resources:

1. Access to print (books, periodicals) and audiovisual materials (DVD, VHS, audio books)
2. Electronic databases (NC LIVE, SIRS, JSTOR, Cochrane Library, Science Direct, and more)
3. Interlibrary Loan
4. Online Renewals
5. Research Guides & Tutorials and Database Instruction
6. Ask-A-Librarian Services (Email, Instant Messaging, and NC KNOWS - Virtual Reference)

Library services are free, and any Wake Tech student or employee may use any of the library services or resources at his or her convenience. All users must complete a library application form and have a valid Wake Tech photo ID, in order to establish a library account.

Library Location	Hours of Operation	Library Location	Hours of Operation
Main (Howell) 9101 Fayetteville Rd. Raleigh, NC 27603 919- 866-5644	Mon. –Thur.: 7:30 a.m. – 9 p.m. Friday: 7:30 a.m. – 5 p.m. Saturday: 9 a.m. – 1 p.m. Sunday: Closed	**Northern Wake** 6600 Louisburg Rd. Raleigh, NC 27616 919- 532-5550	Mon. – Thur.: 7:30 a.m. – 9 p.m. Friday: 7:30 a.m. – 5 p.m. Saturday: 9 a.m. – 1 p.m. Sunday: Closed
Health Sciences 2901 Holston Ln. Raleigh, NC 27610 919- 747-0002	Mon. –Thur.:7:30 a.m. – 9 p.m. Friday: 7:30 a.m. – 5 p.m. Saturday: Select dates each semester Sunday: Closed	**Public Safety Education** 321 Chapanoke Rd. Raleigh, NC 27603 919- 866-6107	Mon. – Friday: 9 a.m. – 3 p.m. Saturday: Closed Sunday: Closed
Western Wake Millpond Village Room #252 3434 Kildaire Farm Rd. Cary, NC 27518 919- 335-1029	Mon. –Thur.: 8 a.m. – 4 p.m. Friday: 8 a.m. – 3 p.m. Saturday: Closed Sunday: Closed		

Overdue Materials & Fines
Books - $0.10 per day, per item (max. $10.00)
Audiovisual & Special Reserve Items - $1.00 per day (max. $10.00)

Fines should be paid in a timely manner to avoid registration blocks. Students with outstanding library fines of $5.00 or more will not be allowed to register for the next semester or obtain their semester grades. At this time, the final notice is mailed and **student records will be blocked** until all materials are returned and fines are paid.

Student Government Association
The Student Government Association (SGA) is the campus organization that represents the interests of all Wake Tech students. Each curriculum student enrolled at Wake Technical Community College is required to pay the Student Administration Fee and shall be a member of the Wake Technical Community College Student Government Association and governed by its rules and regulations.

Student Handbook
All regulations and policies pertaining to student conduct are listed in the student handbook. A planner is included to assist student with their academic calendar. The handbook may be viewed online (http://handbook.waketech.edu/) and copies are available in the Student Services office on each campus. Students are responsible for reading the information in the student handbook.

One condition of enrollment at the College is that the student follows the Student Code of Conduct.

Student Publications
Wake Tech's Student Government Association sponsors a newspaper, titled The Student Voice, which is written, edited, and managed by students with the assistance of an advisor from the Art, Humanities, and Social Sciences Division.

Publications Policy
Publications are defined to include but are not limited to the following: newspapers, pamphlets, newsletters, brochures, flyers, books, posters, or magazines. Publications may not be printed or distributed without official approval of the Dean of Students. Approved campus organizations may post and distribute their publications if said publications have been approved by the president of the organization, the organization's advisor, and the Dean of Students.

All publications (print, electronic, or other) containing URLs or references to the Wake Tech web site must be sent to the webmaster (webmaster@waketech.edu) prior to finalization to ensure that URLs are listed correctly.

Publications containing profanity, language that is offensive to race, sex, or creed, grammatically incorrect statements, and misspelled words will not be approved for printing or distribution. All publications must represent the dignity, mission, and standards of the College. Organizational publications must also be consistent with the philosophy and mission of the organization.

The College reserves the right to rescind approval for on-campus activity for any organization that violates this policy. Individuals found guilty of not conforming to this Publications Policy will face disciplinary action, including suspension from the College.

From time to time, changes made to published, College policies will affect students. The College reserves the right to make such changes and holds students responsible for keeping themselves informed about these changes. Announcements of changes will be emailed to student's "my.waketech.edu" email address and can be found online at http://updates.waketech.edu/.

This policy does not apply to off-campus groups and individuals. Off-campus groups and individuals are allowed to distribute their publications in the designated areas of the main campus and the north campus in accordance with the College's Solicitation policy. See General Information, Solicitation.

Wake Tech Alumni Association
The College encourages its alumni to share information about personal and professional accomplishments through a link on the College website. Inquiries about alumni news should be directed to the College's Foundation Office. An online alumni magazine is in development.

ATHLETICS
GO WAKE TECH EAGLES!!
Wake Tech's Athletics Program allows students to expand the scope of their college experience and encourages them to fulfill personal and academic potential. Since the program was first announced, Wake Tech has received enthusiastic support from potential players, coaches, and excited fans across the community.

The program includes women's volleyball, men's soccer, men's and women's golf, men's and women's basketball, women's softball, men's baseball, and co-ed cheerleading.

The program began in early 2008, when Wake Tech's Board of Trustees approved an athletics program for the college – amid growing campus interest in competitive sports and numerous requests from the Student Government Association.

In the spring of that year, Wake Tech students, staff, and faculty were asked to submit ideas for a team name. From hundreds of suggestions, a selection committee chose "Eagles" as a fitting symbol of Wake Tech strength and pride and held a campus-wide pep rally announcing the name.

Wake Tech President Dr. Stephen C. Scott hired Barry Street, formerly head of athletics at Montgomery College in Rockville, Maryland, as Wake Tech's first Athletics Director. Street brought outstanding credentials as a successful coach and program administrator, having brought home numerous championships in Montgomery as well as implementing the first-ever athletic study hall and overseeing major facility renovations.

By August, coaches had been hired and schedules set for women's volleyball and men's soccer. Both of the young teams brought home multiple wins in their first seasons and represented Wake Tech well – on and off the court and field. Golf began in January of 2009, also delivering wins and building Wake Tech school spirit. Men's and women's basketball and co-ed cheerleading is slated to begin in fall 2009; women's softball and men's baseball in the spring of 2010.

Get in the game! If you're interested in playing, coaching, or following the success of Wake Tech teams, visit http://athletics.waketech.edu.

STUDENT CHAPTERS OF PROFESSIONAL ORGANIZATIONS & CLUBS

The Office of Student Development supports and encourages professional organizations and clubs at Wake Technical Community College. Professional organizations and clubs give students a unique opportunity to develop leadership skills, network with professionals in a given field of study, and get involved. Students interested in joining a club should visit the Office of Student Activities in the Student Services Building. A complete listing of clubs is available in the Wake Tech Student Handbook and online at http://handbook.waketech.edu/, then click on Student Clubs.

Guidelines for Organization Approval

All student organizations must be approved by the College through the Office of Student Development. The following are procedural guidelines for obtaining new student organization approval:

- Students wishing to create a new organization must request an application from the Student Activities Coordinator. The application must include the name of the organization, its purpose, objectives, recommendation for a faculty advisor, procedures for electing officers, means and methods for financing, and other information as requested by the Dean of Students.
- The organization must receive approval from the Coordinator of Student Activities, the Dean of Students, the Vice President of Student Services, and the President of the College before becoming an official college organization.

DISABILITY SERVICES

The mission of Disability Support Services (DSS) is to adapt the College's general services to the specialized, individual needs of otherwise qualified students with disabilities, for the purpose of providing equal access to all programs, facilities, and activities.

Students requesting disability accommodations from the College must self-identify to Disability Support Services. Students are required to submit current documentation of their disability to DSS to determine eligibility prior to the implementation of services. Students requesting accommodations from the College must have a disability as defined by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Self-identification and providing documentation can be initiated at any time; however, the student must allow reasonable time for accommodations to be implemented.

Consistent with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, Wake Technical Community College is committed to equality of educational opportunity and ensures that no qualified person shall by reason of a disability be denied access to, participation in, or the benefits of any program or activity operated by the College. Each qualified person with a disability shall receive necessary reasonable accommodations to ensure equal access to educational opportunities, programs, and activities in the most integrated setting appropriate.

To obtain additional information or to read documentation guidelines and/or DSS Policies and Procedures, please go to the DSS website http://disabilityservices.waketech.edu or contact the DSS office at 919-866-5670 (TTY 779-0668).

ONLINE/DISTANCE EDUCATION

Wake Technical Community College offers students two options for online/distance education instruction: Internet courses, and hybrid courses. These alternatives to traditional seated classes allow students to take courses at times convenient to

their schedules. Each course is facilitated by a qualified, competent instructor who develops the course so that the learning outcomes are comparable to a traditional seated class, who serves as a resource to the students, and who provides a syllabus and course guidelines. Costs and credits earned are the same as on-campus courses, and students have access to equivalent services and resources. Students interested in taking a distance education course should go to the College's website, http://online.waketech.edu/.

Internet Courses
Students registered for Internet courses may be offered the opportunity to attend an orientation or other meeting at the College, but generally the subject matter is presented online and distributed through the College's Blackboard server, http://online.waketech.edu/. Students must have access to a personal computer with Internet connection and browser software. Wake Tech faculty develop and teach online courses.

Before enrolling in an Internet course, students should:
1. Preview the Internet course, http://online.waketech.edu/students/previews.html
2. Participate in the online student orientation, http://online.waketech.edu/students/online.html
3. Review the information posted on the online/distance education website, http://online.waketech.edu/
4. Take the self-assessment entitled “Are You Prepared for an Online Course?”

Hybrid Courses
Hybrid courses combine regular classroom meetings with Internet instruction, reducing the number of hours a class meets on campus during the semester. The instructor determines the class schedule, which is published online. Students must have access to a personal computer with Internet connection and browser software.

Before enrolling in a hybrid course, students should:
1. Preview the hybrid course at http://online.waketech.edu/students/previews.html; and
2. Review the information posted on the online/distance education website at http://online.waketech.edu/.

Testing Center
Online and hybrid course instructors may require students to take tests on campus. The Distance Education Testing Center is located in Room 265 on the Western Wake Campus. Hours are posted online at http://online.waktech.edu/testcnt.html or students may call 919-335-1071.

Library Resources
To maintain a sound learning environment, students enrolled in distance education courses have access to the libraries on the Main, Health Sciences, Northern Wake, Public Safety Education, and Western Wake campuses.

Although traditional library services are available to all students, the College has expanded its services to accommodate distance learning. The library's website, http://library.waketech.edu is available to on-campus, off-campus, and distance education students. The website provides information on interlibrary loans, loan periods, hours of operation, and electronic and print databases. The website has links that provide access to other libraries, resources, search engines, and services such as NC LIVE.

Please view the Libraries section in the Student Services chapter or their website for hours and locations.

GENERAL INFORMATION FOR ALL CAMPUSES

Campus Security & Safety
Website: http://securityservices.waketech.edu

The Board of Trustees of Wake Technical Community College has adopted policy statements in compliance with the dictates of the Jeanne Cleary Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act).

The College’s Director of Security Services is primarily responsible for developing rules and regulations to implement these policies. Crimes on the main campus are reported to the Wake County Sheriff’s Department (or other appropriate law enforcement agency), which investigates on-campus murder, criminal sexual assault, criminal sexual abuse, robbery, aggravated assault, aggravated battery, burglary, motor vehicle theft, liquor law violations, drug abuse violations, weapons possession, and other emergencies on campus considered to be a threat to safety. Crimes on the Adult Education campus, the Health Sciences campus, Northern Wake campus and Public Safety Education campus are reported to the Raleigh Police Department. Crimes on the Western Wake campus are reported to Cary Police Department. Crimes on the Plastics Technology campus are reported to the Zebulon Police Department. Timely reports of such occurrences are made to employees and students. In the event the perpetrator of a violent crime is subject to discipline by the College, the victim of the crime shall, at the discretion of the College’s administration, be permitted to obtain results of the disciplinary proceeding.

The College's Security Services Division prepares, publishes, and distributes statistical reports that identify the occurrence of campus crimes and the number of campus arrests involving liquor law violations, drug abuse violations, and weapons violations. The policy statements and statistical reports are available upon request to students and employees as well as prospective students and the higher education community at Holding Hall, room 101A, Main Campus, 9101 Fayetteville road, Raleigh, NC 27603.

Security patrol and traffic control matters are handled by a private security company under contract with the College. This company is responsible to the College's Director of Security Services, whose office is on Main Campus, in Holding Hall, room 101A and whose telephone number is 919-866-5532. The Director of Security Services also can be contacted by dialing the College's main switchboard number, 919-866-5000 (from off-campus or from a coin telephone). Students, employees, and visitors are encouraged to report criminal activity and other emergencies on any campus at the College's emergency number, 919-866-5911.

Students and employees are prohibited from bringing onto campus or using alcohol or illegal drugs on campus or during any College activity. Limited exceptions to this policy may be granted by the College's President or designee. The College has a Drug and Substance Abuse Council, which offers help to students and employees in seeking counseling and/or assistance programs. From time to time workshops and seminars are conducted on campus relating to Crime and Safety, Drugs and Alcohol, Self-Defense, and Date Rape.

Other information is periodically published in the Campus Connections at http://connections.waketech.edu/ and the student newsletter, The Eagle's Eye. The student newspaper, The Student Voice discusses and debates health, safety, self-defense, etc., issues.

Campus safety means protecting people and property. People working together can make our campuses safe and secure working and learning environments. Report suspicious persons, vehicles, and activities to the Security Patrol Officer or the Director of Security Services at 919-866-5911. Students attending classes in the evenings should walk in well-lighted areas with someone or near other people. Extra precaution should be taken by using sidewalks and crosswalks and by avoiding isolated areas. Personal valuables should be marked and NOT left unattended. Vehicles should be parked in a well-lighted area and locked.

Presentations by Local Law Enforcement Personnel
Presentations are conducted by the Wake County Sheriff's Department, Raleigh Police Department, SBI, and the N.C. Highway Patrol concerning robbery, motor vehicle theft, and drugs and alcohol.

Annual Report of Criminal Offenses
The Clery Act, requires publication of criminal activity in the following categories. The figures shown in the tables below encompass all campuses of Wake Technical Community College.

Main Campus

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Criminal Homicide	0	0	0
Sexual Offenses	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	1	3
Motor Vehicle Theft	0	1	1
Arson	0	0	0
Hate Crimes	0	0	0

The following are statistics regarding arrests on campus in the listed categories:

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Liquor Law Violations	0	0	0
Drug Abuse Violations	1	0	0
Weapon Possessions	0	0	0

Health Sciences

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Criminal Homicide	0	0	0
Sexual Offenses	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Hate Crimes	0	0	0

The following are statistics regarding arrests on campus in the listed categories:

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Liquor Law Violations	0	0	0
Drug Abuse Violations	0	0	0
Weapon Possessions	0	0	0

Northern Wake Campus

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Criminal Homicide	0	0	0
Sexual Offenses	0	0	0
Robbery	1	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Hate Crimes	0	0	0

The following are statistics regarding arrests on campus in the listed categories:

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Liquor Law Violations	0	0	0
Drug Abuse Violations	1	0	0
Weapon Possessions	0	0	0

Western Wake Campus

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Criminal Homicide	0	0	0
Sexual Offenses	0	0	0
Robbery	0	0	0
Aggravated Assault	0	0	0
Burglary	0	0	0
Motor Vehicle Theft	0	0	0
Arson	0	0	0
Hate Crimes	0	0	0

The following are statistics regarding arrests on campus in the listed categories:

Category	Calendar Year 2009	Calendar Year 2008	Calendar Year 2007
Liquor Law Violations	0	0	0
Drug Abuse Violations	0	0	0
Weapon Possessions	0	0	0

Threat Assessment & Violence Prevention

To create an atmosphere that encourages learning and productivity, Wake Tech will consider the following behaviors unacceptable:

- Injuring another person physically;
- Engaging in behavior causing concern that creates a reasonable fear of injury to another person;
- Engaging in behavior causing concern that subjects another individual to undue emotional distress;
- Possessing, brandishing, or using a weapon that is not required by the individual's position while on College premises or engaged in College business;
- Intentionally damaging property;
- Threatening to injure an individual or to damage property;
- Committing injurious acts motivated by, or related to, domestic violence or sexual harassment;
- Retaliating against any person who, in good faith, reports a violation of this policy and,
- Any other behavior or activity that creates a threat or danger to a person or the campus environment.

This policy will be enforceable at any property, building, or other facility that is owned, leased, or used by Wake Technical Community College for any College activity. Violators will be subject to the College's disciplinary policies and/or State statutes as appropriate.

Drug and Alcohol Policy

No student shall distribute, dispense, possess, use, or be under the influence of any alcoholic beverage, malt beverage, or fortified wine or other intoxicating liquor; or unlawfully manufacture, distribute, dispense, possess, or use or be under the influence of any narcotic drug, hallucinogenic drug, amphetamine, barbiturate, marijuana, anabolic steroid, or any other controlled substance, as defined in Schedule I through V of Section 202 of the Controlled Substance Act (21 U.S.C. Section 812) and as further defined by regulation at 21 C.F.R. 1300.11 through 1300.15 or Article 5 of Chapter 90 of the North Carolina General Statutes, as amended from time to time, in any college location as defined below.

"College location" means in any college building or on any college premises; in any college-owned vehicle or in any other college-approved vehicle used to transport students to and from college or college activities; off college property at any college-sponsored or college-approved activity, event or function, such as a field trip or athletic event, where students are under the jurisdiction of the college.

Any student who violates the terms of this policy may be suspended or expelled from the college in accordance with the Student Rights, Responsibilities, and Procedures Policy, found in the Student Handbook, or may be required to or requested to participate in a drug abuse assistance and rehabilitation program approved by the Board of Trustees. If such student fails to satisfactorily participate in such program, the student shall be suspended or expelled from the college in accordance with the Student Rights, Responsibilities, and Procedures Policy.

Drug Abuse Prevention Program

The College has materials relating to drug abuse prevention available to all students, faculty, and staff. Interested individuals are encouraged to make use of these materials, which are located in the libraries on the Main, Health Sciences, Western Wake, Public Safety Education, and Northern Wake campuses.

Title IX Policy (Sexual Misconduct)

Procedures:

Title IX of the Education Amendments of 1972 states: "*No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.*"

Wake Technical Community College is committed to providing a learning, working and living environment that promotes respect, responsibility, communication, collaboration, critical thinking, and accountability in an environment free of sexual misconduct and discrimination. Sexual discrimination violates an individual's fundamental rights and personal dignity. Wake Technical Community College considers sexual discrimination in all its forms to be a serious offense. This plan refers to all forms of sexual discrimination, including: sexual harassment, sexual assault, and sexual violence by employees, students, or third parties. (Title 20 U.S.C. Sections 1681-1688)

Wake Technical Community College has a responsibility to ensure compliance by demonstrating that our education programs and other activities are operated in a manner consistent with Title IX regulations and provisions. If you feel you have been subjected to sexual harassment or discrimination, you should seek assistance as soon as possible. Please review the **Sexual or Gender Misconduct Plan** and the related **Plan Explanations** listed below**.**

The Senior Vice President for Student Services, Rita Jerman, and the Chief Human Resource Officer, Benita Clark, are Wake Technical Community College's Title IX Coordinators and are responsible for implementing and monitoring Wake Technical Community College's Title IX compliance. Deputy coordinators and investigators are also trained to assist in carrying out Title IX duties.

Ms. Rita Jerman
919-866-5701
whjerman@waketech.edu

Ms. Benita Clark
919-866-7894
biclark@waketech.edu

When concerns are brought to the Coordinators' attention or when they suspect that sexual or gender discrimination may be present, they are bound to initiate and oversee timely investigations and provide updates to the accuser and the accused. All faculty and staff are required to cooperate fully, truthfully, and expediently with investigations.

More information about Title IX

Retaliation is Prohibited
You have the right to raise concerns, to ask questions about our policies prohibiting sex or gender discrimination, and to participate in investigations without fear of retaliation. You also have the right to submit a complaint about retaliatory acts under Title IX.

How Can We Help
Our plan helps to insure the Wake Technical Community College's community is free from discrimination based on sex or gender behavior. We are here to help assist you in an effective and efficient manner. If you feel you are experiencing sexual discrimination, the **most** important thing you can do is to get help. The contacts listed below will be able to guide you and provide important resources.

Who Should I Contact
If you think you have been a victim of sex or gender discrimination, or if you are aware of its existence in any of our education programs or activities, or you have any questions about the sexual or gender misconduct policy, you can get help from any of the offices/individuals below:

Faculty or Staff: Contact the Chief Human Resource Officer and Title IX Coordinator, your Supervisor, or Campus Security;

Students: Contact the Senior Vice President for Student Services, any Student Services Dean, Counseling Staff, Athletic Director, or Campus Security; and

Visitors, Applicants for employment: Contact Chief Human Resource Officer or Campus Security.

Sexual/Gender Misconduct Plan & Plan Expectations

I. PLAN STATEMENT
Members of the Wake Technical Community College's community, guests, and visitors have the right to be free from sexual violence. All members of the campus community are expected to conduct themselves in a manner that does not infringe upon the rights of others. Wake Technical Community College believes in zero tolerance sexual or gender-based misconduct. When an allegation of misconduct is brought to an appropriate administrator's attention, and a respondent is found to have violated this plan, serious sanctions will be imposed to reasonably ensure that such actions are never repeated.

This plan has been developed to reaffirm these principles and to provide recourse for those individuals whose rights have been violated. This plan is intended to define community expectations and to establish a mechanism for determining when those expectations have been violated.

II. EXPECTATIONS WITH RESPECT TO PHYSICAL SEXUAL MISCONDUCT
The expectations of our community regarding sexual misconduct can be summarized as follows: In order for individuals to engage in sexual activity of any type with each other, there must be clear, knowing and voluntary consent prior to and during sexual activity. Consent is sexual permission. Consent can be given by word or action, but non-verbal consent is not as clear as talking about what you want sexually and what you don't. Consent to one form of sexual activity cannot be automatically taken as consent to any other form of sexual activity. Silence--without actions demonstrating permission--cannot be assumed to show consent.

Additionally, there is a difference between seduction and coercion. Coercing someone into sexual activity violates this plan in the same way as physically forcing someone into sex. Coercion happens when someone is pressured unreasonably for sex.

Because alcohol or other drug use can place the capacity to consent in question, sober sex is less likely to raise such questions. When alcohol or other drugs are being used, a person will be considered unable to give valid consent if they cannot fully understand the details of a sexual interaction ("who, what, when, where, why, or how") because they lack the capacity to reasonably understand the situation. Individuals who consent to sex must be able to understand what they are doing. Under this plan, "No" always means "No," and "Yes" may not always mean "Yes." Anything less than a clear, knowing and voluntary consent to any sexual activity is equivalent to a "No."

III. EXPECTATIONS WITH RESPECT TO CONSENSUAL RELATIONSHIPS

There are inherent risks in any romantic or sexual relationship between individuals in unequal positions (such as teacher and student, supervisor and employee). These relationships may be less consensual than perceived by the individual whose position confers power. The relationship also may be viewed in different ways by each of the parties, particularly in retrospect. Furthermore, circumstances may change, and conduct that was previously welcome may become unwelcome. Even when both parties have consented at the outset to a romantic or sexual involvement, this past consent may not remove grounds for a later charge of a violation of applicable sections of the faculty/staff handbooks.

The College does not wish to interfere with private choices regarding personal relationships when these relationships do not interfere with the goals and policies of the College. For the personal protection of members of this community, relationships in which power differentials are inherent (faculty-student, staff-student, administrator-student) are generally discouraged. Consensual romantic or sexual relationships in which one party maintains a direct supervisory or evaluative role over the other party are unethical.

Therefore, persons with direct supervisory or evaluative responsibilities who are involved in such relationships must bring those relationships to the timely attention of their supervisor; this will likely result in removing the employee from the supervisory or evaluative responsibilities, or shifting the student from being taught or evaluated by someone with whom they have established a consensual relationship. While no relationships are prohibited by this plan, failure to self-report such relationships to a supervisor as required can result in disciplinary action for an employee.

IV. SEXUAL VIOLENCE -- RISK REDUCTION TIPS

Risk reduction tips can often take a victim-blaming tone, even unintentionally. With no intention to victim-blame, and with recognition that only those who commit sexual violence are responsible for those actions, these suggestions may nevertheless help you to reduce your risk of experiencing a non-consensual sexual act. Set out below are suggestions to avoid committing a non-consensual sexual act:

1. If you have limits, make them known as early as possible.
2. Tell a sexual aggressor "NO" clearly and firmly.
3. Try to remove yourself from the physical presence of a sexual aggressor.
4. Find someone nearby and ask for help.
5. Take affirmative responsibility for your alcohol intake/drug use and acknowledge that alcohol/drugs lower your sexual inhibitions and may make you vulnerable to someone who views a drunk or high person as a sexual opportunity.
6. Take care of your friends and ask that they take care of you. A real friend will challenge you if you are about to make a mistake. Respect them when they do.

If you find yourself in the position of being the initiator of sexual behavior, you owe sexual respect to your potential partner. These suggestions may help you to reduce your risk for being accused of sexual misconduct:

1. Clearly communicate your intentions to your sexual partner and give them a chance to clearly relate their intentions to you.
2. Understand and respect personal boundaries.
3. DON'T MAKE ASSUMPTIONS about consent; about someone's sexual availability; about whether they are attracted to you; about how far you can go or about whether they are physically and/or mentally able to consent. If there are any questions or ambiguity then you DO NOT have consent.
4. Mixed messages from your partner are a clear indication that you should stop, defuse any sexual tension and communicate better. You may be misreading them. They may not have figured out how far they want to go with you yet. You must respect the timeline for sexual behaviors with which they are comfortable.
5. Don't take advantage of someone's drunkenness or drugged state, even if they did it to themselves.
6. Realize that your potential partner could be intimidated by you, or fearful. You may have a power advantage simply because of your gender or size. Don't abuse that power.

7. Understand that consent to one form of sexual behavior does not automatically imply consent to any other forms of sexual behavior.
8. Silence and passivity cannot be interpreted as an indication of consent. Read your potential partner carefully, paying attention to verbal and non-verbal communication and body language.

In campus hearings, legal terms like "guilt, "innocence," and "burdens of proof" are not applicable, but the College never assumes a student is in violation of College policy. Campus hearings are conducted to take into account the totality of all evidence available, from all relevant sources.

The College reserves the right to take whatever measures it deems necessary in response to an allegation of sexual misconduct in order to protect students' rights and personal safety. Such measures include, but are not limited to, modification of class schedule, interim suspension from campus pending a hearing, and reporting the matter to the local police. Not all forms of sexual misconduct will be deemed to be equally serious offenses, and the College reserves the right to impose different sanctions, ranging from verbal warning to expulsion, depending on the severity of the offense. The College will consider the concerns and rights of both the complainant and the person accused of sexual misconduct.

V. SEXUAL MISCONDUCT OFFENSES INCLUDE, BUT ARE NOT LIMITED TO:

1. Sexual Harassment;
2. Non-Consensual Sexual Contact (or attempts to commit same);
3. Non-Consensual Sexual Intercourse (or attempts to commit same); and
4. Sexual Exploitation.

1. **SEXUAL HARASSMENT**:

Sexual Harassment is

- unwelcome, gender-based verbal or physical conduct that is,
- sufficiently severe, persistent or pervasive that,
- unreasonably interferes with, denies or limits someone's ability to participate in or benefit from the College's educational program and/or activities, and is
- based on power differentials (quid pro quo), the creation of a hostile environment, or retaliation.

Examples include: an attempt to coerce an unwilling person into a sexual relationship; to repeatedly subject a person to egregious, unwelcome sexual attention; to punish a refusal to comply with a sexual based request; to condition a benefit on submitting to sexual advances; sexual violence; intimate partner violence, stalking; gender-based bullying.

2. **NON-CONSENSUAL SEXUAL CONTACT:**

Non-Consensual Sexual Contact is

- any intentional sexual touching, however slight, with any object, by a man or a woman upon a man or a woman, that is without consent and/or by force.

Sexual Contact includes:

- Intentional contact with the breasts, buttock, groin, or genitals, or touching another with any of these body parts, or making another touch you or themselves with or on any of these body parts; any intentional bodily contact in a sexual manner, though not involving contact with/or/by breasts, buttocks, groin, genitals, mouth or other orifice.

3. **NON-CONSENSUAL SEXUAL INTERCOURSE**:

Non-Consensual Sexual Intercourse is

- any sexual intercourse, however slight, with any object, by a man or woman upon a man or a woman, that is without consent and/or by force.

Intercourse includes:

- vaginal penetration by a penis, object, tongue or finger, anal penetration by a penis, object, tongue, or finger, and oral copulation (mouth to genital contact or genital to mouth contact), no matter how slight the penetration or contact.

4. **SEXUAL EXPLOITATION**:

Occurs when a person takes non-consensual or abusive sexual advantage of another for his/her own advantage or benefit, or to benefit or advantage anyone other than the one being exploited, and that behavior does not otherwise constitute one of the other sexual misconduct offenses. Examples of sexual exploitation include, but are not limited to:

- invasion of sexual privacy;
- prostituting another person;

- non-consensual video or audio-taping of sexual activity;
- going beyond the boundaries of consent (such as letting your friends hide in the closet to watch you having consensual sex);
- engaging in voyeurism;
- knowingly transmitting an STI or HIV to another student;
- exposing one's genitals in non-consensual circumstances; inducing another to expose their genitals; and
- sexually-based stalking and/or bullying may also be forms of sexual exploitation.

VI. ADDITIONAL APPLICABLE DEFINITIONS

- Consent: Consent is clear, knowing, and voluntary. Consent is active, not passive. Silence, in and of itself, cannot be interpreted as consent. Consent can be given by words or actions, as long as those words or actions create mutually understandable clear permission regarding willingness to engage in (and the conditions of) sexual activity.
- Consent to any one form of sexual activity cannot automatically imply consent to any other forms of sexual activity.
- Previous relationships or prior consent cannot imply consent to future sexual acts.
- Force is the use of physical violence and/or imposing on someone physically to gain sexual access. Force also includes threats, intimidation (implied threats), and coercion that overcome resistance or produce consent ("Have sex with me or I'll hit you. Okay, don't hit me, I'll do what you want.").
- Coercion is unreasonable pressure for sexual activity. Coercive behavior differs from seductive behavior based on the type of pressure someone uses to get consent from another. When someone makes clear to you that they do not want sex, that they want to stop, or that they do not want to go past a certain point of sexual interaction, continued pressure beyond that point can be coercive.
- NOTE: There is no requirement that a party resist the sexual advance or request, but resistance is a clear demonstration of non-consent. The presence of force is not demonstrated by the absence of resistance. Sexual activity that is forced is by definition non-consensual, but non-consensual sexual activity is not by definition forced.
- In order to give effective consent, one must be of legal age.
- Sexual activity with someone who one should know to be -- or based on the circumstances should reasonably have known to be -- mentally or physically incapacitated (by alcohol or other drug use, unconsciousness or blackout), constitutes a violation of this plan.

    - Incapacitation is a state where someone cannot make rational, reasonable decisions because they lack the capacity to give knowing consent (e.g., to understand the "who, what, when, where, why or how" of their sexual interaction).
    - This plan also covers a person whose incapacity results from mental disability, sleep, involuntary physical restraint, or from the taking of rape drugs. Possession, use and/or distribution of any of these substances, including Rohypnol, Ketomine, GHB, Burundanga, etc. is prohibited, and administering one of these drugs to another student is a violation of this plan. More information on these drugs can be found at: http://www.911rape.org/.

- Use of alcohol or other drugs will never function as a defense for any behavior that violates this plan.
- The sexual orientation and/or gender identity of individuals engaging in sexual activity is not relevant to allegations under this plan. For reference to the pertinent state statutes on sex offenses, please see Article 7A of Chapter 14 of the North Carolina General Statutes.

VII. STATEMENT

- Any student found responsible for violating the plan on Non-Consensual or Forced Sexual Contact (where no intercourse has occurred) will likely receive a sanction ranging from probation to expulsion, depending on the severity of the incident, and taking into account any previous campus conduct code violations.*
- Any student found responsible for violating the plan on Non-Consensual or Forced Sexual Intercourse will likely face a recommended sanction of suspension or expulsion.*
- Any student found responsible for violating the plan on sexual exploitation or sexual harassment will likely receive a recommended sanction ranging from warning to expulsion, depending on the severity of the incident, and taking into account any previous campus conduct code violations.*

***The conduct body** reserves the right to broaden or lessen any range of recommended sanctions in the case of serious mitigating circumstances or egregiously offensive behavior. Neither the initial hearing officers nor any appeals body or officer will deviate from the range of recommended sanctions unless compelling justification exists to do so.

Housing

The College does not have housing facilities, but students should have no difficulty in locating satisfactory housing.

Inclement Weather Schedule

Information regarding the closing of the College because of inclement weather will be announced on local radio and television stations and is posted on Wake Tech's website. In the event that bad weather occurs after the opening of the College, announcement of the dismissal of classes will come from the administrative officer in charge at that time.

When Inclement Weather Hits:

- If the College is closed, all classes at all sites are cancelled.
- If evening classes are cancelled, all classes at all sites are cancelled.
- If the College is open but Wake County Public Schools (WCPSS) are closed, Wake Tech classes scheduled at Wake County Public School sites are cancelled.

You can determine if your classes are cancelled by:

1. Checking the Wake Tech website www.waketech.edu
2. Calling the college switchboard at 919-866-5000, or
3. Checking local media stations (radio or television) for the latest information.

Computer & Internet Acceptable Use Policy

College owned or operated computing resources are reserved for the educational, instructional, research, and administrative computing needs of the faculty, students, staff, and other individuals authorized by the College. The College's computing resources include, but are not limited to, all College computers and hardware, access to the Internet or access to any College intranet provided through College owned or operated computers, online and offline storage, network and communications facilities, telephone systems, and cellular telephone devices.. **Access to these computing resources is a privilege and, therefore, it is essential that all users exercise responsible ethical behavior when using these resources. Users are expected to read, understand, and comply with the College's Acceptable Use Policy.**

The College monitors access to these computing resources and reserves the right, without prior notice to users, to access the College's computing resources and to use any and all information retrieved from the computing resources. **Users do not have an expectation of privacy regarding their use of the computing resources, and by accessing and using the College's computing resources,** users expressly consent to such monitoring, access, and use by the College. Further, information contained on the College's computing resources and in College accounts, including but not limited to e-mail, **may be subject to inspection under the Public Records Law of the State of North Carolina.**
The College does not attempt to articulate all required or unacceptable behavior by its users. Therefore, each user's judgment on appropriate conduct must be relied upon. To assist in such judgment, users will follow this policy:

1. **College computing resources** are to be used only for educational, research, or instructional purposes for which access is provided, and **are not to be used for any unauthorized purpose**, including but not limited to commercial purposes, unauthorized access to remote computers or non-College related activities.
2. **An access account assigned to a user must not be used by any other individual**. Users are responsible for the proper use of their accounts, including proper password protection and appropriate use of the College's computing resources. Obtaining another user's password, allowing friends, family, co-workers, work-study students, student workers, or any other individual use of your or another user's account, or other unauthorized use of an access account, is a serious violation of this policy.
3. **Users shall not create, display, transmit, or make accessible threatening, racist, sexist, obscene, offensive, annoying or harassing language, e-mail messages, and/or material, including broadcasting unsolicited messages, sending unwanted e-mail, or impersonating other users.** Remember - the College's policies against discrimination and harassment apply to communications through the College's computing resources.
4. **All computer software is protected by federal copyright law.** In addition, most software is proprietary and protected by legal licensing agreements. Users are responsible for knowledge of the licensing restrictions for any software used on the College's computing resources. Unless specifically granted permission, a user may not copy software, or use College-software software on anything but College-owned equipment.
5. **Users shall not download, reproduce and/or distribute copyrighted or licensed materials without proper authorization from the author or creator.** Additionally, users shall not publish information, messages, graphics, or photographs on any web page, without the express permission of the author or creator.
6. **Users shall not engage in activities to damage or disrupt the hardware, software, or any communication** associated with the College's computing resources, such as virus creation and propagation, wasting system resources, overloading networks with excessive data, or any attempt to circumvent data protection schemes or uncover security loopholes.

7. **Users shall not waste, monopolize, interfere or misuse the College's computing resources** by, for example, requesting an excessive number of copies from a printer, playing games, or participating in chain letters or Ponzi schemes.
8. **Users shall not access or damage any portion of the College's computing resources** or other College property, such as College records, or use the College's computing resources for illegal activities.
9. **Users may not connect personal or non-College-owned equipment to the campus network unless given specific authorization** prior to the event. Users MAY connect laptops to smart classroom lecterns which were specifically designed for this purpose.
10. **Students may not use employee computers.** Most employee computers have access to the faculty/staff networks, colleague, and other sensitive data. For this reason, students may not use employee computers.
11. **Users learning of the misuse of the College's computing resources or violations of this Acceptable Use Policy should notify the Chief Information Officer or any employee of ITS immediately.**

Enforcement
Failure to follow the Acceptable Use Policy and any misuse of the College's computing resources may result in the suspension or revoking of access accounts. Employees violating the policy are subject to disciplinary action as deemed appropriate by their immediate supervisor. Students violating the policy are subject to an immediate grade penalty of "F" and will not be allowed to further participate in the class. All College policies and procedures are applicable to users of the College's computing resources.

Any conduct, which violates local, state, or federal laws, will result in the immediate loss of all access to the College computing resources and will be referred to appropriate College offices and/or law enforcement authorities. Wake Technical Community College is not liable for actions of anyone connected to the Internet through the College's computing resources. All users will assume full liability: legal, financial or otherwise, for their actions.

Website Policy

Official Public Web Site
WWW.WAKETECH.EDU (http://www.waketech.edu/) is the only official website of the college and as such must be administered by college officials and the college webmaster (who manages content and design) on servers maintained, or external services approved, by Wake Tech's Information Technology Services area.

Blogs
Blogs may be provided to certain entities upon request. All blog web sites must reside on Wake Tech's servers and must be the official responsibility of an employee with a key account. (Key accounts are used for login.) Blogs must be moderated by a faculty or staff member, although students may be permitted to edit blogs.

The Student Activities Department may request blogs for college clubs and organizations. Club advisors (faculty or staff) may request design services for their club's blog or add a student editor by submitting a work order. Club advisors are expected to review student posts to ensure appropriate content.

Social Networking/Supplemental Online Services
Use of such services must be arranged through the webmaster, who will register an account with the social networking service requested, record the username and password, and notify the employee. (Username and password may not be changed.) A College employee will be responsible for maintaining the service and may contact the webmaster for assistance as needed.

The webmaster will maintain account records in case content needs review or someone other than the original user assumes responsibility for the service.

External Web Sites
Students, faculty, and staff are not permitted to use Wake Tech's name or official logos, graphics, or information or to state or imply any official association with the college in web sites they create outside of Wake Tech's servers.
Violation of any of the above provisions will result in disciplinary action up to and including termination or expulsion.

Lost and Found
Wake Tech's "Lost and Found" repositories are located in the receptionist area on most campuses, with the exception of the Main Campus and the North Campus. On the Main Campus the repository is located in the Student Services Building, in the Student Activities Department. On the Northern Campus the repository is located in Building D, room 206-B.

Transportation

Wake Technical Community College provides bus service for students between downtown Raleigh and the Main Campus. The bus stop on Main Campus is located in front of the Pucher Lemay Building. A schedule can be obtained in Holding Hall, Student Services, or the Individualized Learning Center.

Solicitation

Notice: No amendments, changes, or modifications may be made to this policy (Solicitation – RefID#1427) until August 1, 2014 prior to consultation with WTCC General Counsel 7/28/09

Solicitations occur in numerous forms, formats, and techniques. For the purposes of this handbook, solicitations are deemed to include, among other activities, attempts to address all or portions of the College community to express social, political, religious or other views; to disseminate written materials; or to request, accept, or collect donations or contributions.

Any individual, organization, agency, or group that desires to solicit on any property which is owned, leased, or operated under the jurisdiction of the College is required to comply with the procedures listed below.

A. Expressive Activities

1. On-Campus Groups and Individuals

On-campus groups and individuals may reserve designated outdoor space for use in support of their activities. Arrangements for the use of outdoor space shall comply with campus reservation procedures and WTCC protocols.

2. Off-Campus Groups and Individuals

a. General provisions

Speakers will be granted access to designated areas so long as notice has been provided consistent with this policy, granting access will not conflict with any previously-scheduled events, and the designated area is not temporarily inaccessible or unsafe due to construction, act of God or similar cause.
Access will not be denied because of a speaker's viewpoint or the content of his or her speech.
Access will be granted on a first-come, first-served, space-available basis.

Gross, multiple, or continued violation of this solicitation policy will result in the soliciting party's loss or suspension of future solicitation privileges on property which is owned, leased, or operated under the jurisdiction of the College.

b. Notice Requirement

Speakers must provide written notice to the Office of the President three business days in advance of an intent to speak. Click here for required form, Solicitation Request Form

Upon arriving on campus, speakers must check in with the Office of Security Services.

c. Information Requirement

Speakers must provide the names of the persons who intend to speak on campus, the anticipated size of the group that will visit campus with the speaker, and the name, address and phone number of a responsible contact person who will be present on campus during the event.

Disclosure of this information is required to permit proper planning and will not be grounds for denying or abridging the right to engage in expressive activities in the designated area.

d. Designated Areas

The following areas are designated for expressive activities by off-campus groups and individuals:

i. Main Campus: the paved area directly outside and adjacent to the north corner of the Pucher-LeMay building

ii. Northern Wake Campus: the flagpole circle

e. Scheduling Limitations

At the beginning of the academic year, the President shall establish a schedule of two days per week for expressive activities by off-campus groups and individuals. These areas will be made available to any off-campus group or individual for up to three hours per day between 10:00 a.m. and 4:00 p.m.

In order to promote opportunities for a diversity of speakers, a speaker may not reserve the forum more than two weeks in advance.

3. **Noise Restrictions**
   No sound amplification is permitted. Also noise levels that are reasonably likely to or do cause a material disruption to the learning environment or the normal administration or operation of the College are prohibited.

4. **Grounds for Denial of Access or Removal from WTCC Property**
   Speakers will be denied access or removed from WTCC property for the following:

   a. Failing to comply with this policy.

   b. Communicating "fighting words" as defined in case law.

   c. Advocating illegal conduct that is directed to inciting or producing imminent lawless action and is likely to incite or produce such action.

   d. Touching, striking, or impeding the progress of pedestrians, except for incidental or accidental contact, or contact initiated by a pedestrian.

   e. Photographing, audio recording, or videotaping any faculty, staff or student without first obtaining written permission from the person to be photographed, audio recorded or videotaped.

   f. Engaging in disruptive or disorderly conduct that is reasonably likely to cause a material disruption to the learning environment or the normal administration or operation of the College.

   g. Damaging, destroying or stealing College or private property on campus.

   h. Possessing or using firearms, explosives, or dangerous weapons or substances.

   i. Obstructing the free flow of pedestrian or vehicular traffic.

B. Distribution of Written Materials
Pamphlets, publications, advertisements, and any other such materials may not be distributed through any form of the College's internal mail system. Such materials may, however, be distributed by hand at such time(s) and at such location(s) as may be designated in writing by the College President, so long as the group or individual has complied with the requirements of Section A above. Distribution of written materials will not be denied based solely on the content or the viewpoints expressed in the materials

Any individual, organization, agency, or group that distributes written materials on any property which is owned, leased, or operated under the jurisdiction of the College shall reimburse the College for any of the College's internal or external clean-up costs associated with the distribution of such materials.

C. Posting of Messages or Materials
It is expressly prohibited for any individual, agency, organization, or group not officially affiliated with the College to use any surface such as walls, bulletin boards, trees, or the like located on any property owned, leased, or operated under the jurisdiction of the College to display any written or otherwise visual materials.

D. Commercial Use of Bulletin Boards
The College provides some bulletin board space for its students and employees to advertise or request goods and services. Other than such limited use by the College's students and employees, bulletin boards located on any property that is owned, leased, or operated under the jurisdiction of the College may not be used for commercial purposes.

E. Donations and Contributions
On-campus individuals, organizations, and groups may solicit, accept, or collect donations or contributions on property which is owned, leased, or operated under the jurisdiction of the College for not-for-profit activities only. Prior to engaging in any such activities, individuals, organizations, and groups who desire to solicit, accept, or collect donations or contributions shall request permission in writing from the Office of the College President.

F. Goods and Services
Students who desire to solicit on any property that is owned, leased, or operated under the jurisdiction of the College to provide goods or services must make their request in writing to the Dean of Students. The request must contain a full

description of the activity as to time, benefit, etc., in order to be considered. The decision as to whether such request will be allowed or denied and any conditions attached thereto shall be within the Dean‘s discretion. The Dean shall respond to all such requests in writing within five (5) working days from the date the request is received. All other individuals, organizations, agencies, or causes are prohibited from canvassing, selling, offering for sale, soliciting, or promoting the sale or advancement of any goods or services on any property which is owned, leased, or operated under the jurisdiction of the College.

Click here for required form, Solicitation Request Form

END SOLICITATION POLICY –

CAMPUS USE POLICIES

Students have a right to use all resources and facilities of the College during normal operating hours with the proper authorization. Students may not utilize resources and facilities of the College after hours without prior official approval and without faculty supervision. The security personnel must be notified under these unusual circumstances.

Cell Phones

Students may not engage in any activity that is disruptive to orderly classroom instruction, without limitations to the use of cell phone or pager calls; students are therefore required to disengage all such devices when in a classroom.

Dress Code (Students) and Cleanliness

Personal cleanliness is an expectation in the College environment. This expectation implies appropriate use of the disposal containers in the halls and in all areas of shops, classrooms, lounges, and cafeteria. Littering is not allowed.

Students are expected to dress appropriate to their major area of study. Students are not allowed on any campus facility without shoes and shirts. Caps and hats should not be worn in any classroom.

In the areas of study that require special clothing, students will attire themselves accordingly. Safety equipment such as goggles, shields, helmets, etc., is available and in some instances, required for student participation in shop and laboratory activities.

In cases where a student’s dress or hygiene interferes with the learning process, the instructor shall conduct initial counseling with student. Repeated occurrences will result in referral to the Dean of Students Office or designee.

Emergency Exit Procedures

If the need should arise to evacuate a building because of fire or other impending danger, a general alarm will be sounded. When such an alarm is sounded, individuals should leave the building by way of the nearest exit. Individuals should become familiar with posted evacuation routes.

Food and Beverages

Food and beverages are not permitted in classrooms, laboratories, shops, learning centers, libraries, or in any instructional area. This policy applies at all Wake Tech campuses, community school locations, and other facilities.

Health and Safety

Insurance and Accidents

The College cannot assume responsibility for injuries or losses sustained on or off campus by any student. Accident insurance is included in the Student Administration fee for all curriculum students.

All students covered by the insurance policy are responsible for reading the Student Accident Insurance Brochure (Policy) and following the claim procedures. After the accident has been reported and logged with campus security, the student may present a copy of any itemized medical bills to the Office of the Registrar, to receive an Accident Insurance Claim form. The Office of the Registrar will not release an Accident Insurance Claim form until receipt of the accident report from campus security. The accident claim must be filed within 90 days of treatment for any injury.

The College requires each person enrolling in a Health Sciences curriculum to have student malpractice liability insurance coverage in the amount of $2,000,000/ $5,000,000. This professional liability insurance may be purchased from most local insurance agencies or through a blanket liability insurance program at the College. Proof of coverage must be presented at the time of registration by providing the policy or certification of insurance. In the absence of proof of coverage, students enrolled in a Health Sciences curriculum are required to purchase professional liability insurance through the College’s blanket liability insurance program at the time of registration. Students participating in sports activities are required to have accident insurance. Additional personal injury insurance may be required for the athletics program.

Health and Safety Program Responsibility
The responsibility for the organization, supervision, personnel training, and evaluation of an institutional program of health and safety has been assigned to the Facilities Engineer or a designee.

Notification of Accidents
Notification procedures for all accidents involving students and visitors are as follows:

- Students and visitors should notify campus security at 919-866-5911 of all accidents that occur on any Wake Technical Community College campus facility.
- Campus security will complete an incident report for all accidents and forward documentation to the appropriate service areas for accident insurance, facility maintenance, etc.

Administering of First Aid
From time to time students, employees, or visitors could be injured during the course of regular College activities. In the event of minor scratches and abrasions, first aid may be administered by College employees who are responsible for areas in which first aid kits are located. Only the supplies in the kits should be used, and in no circumstances should any medication be provided for oral consumption. Security Officers on any campus will assist and administer first aid and can be contacted at the College emergency number, 919-866-5911.

In the case of more severe injuries, employees on the scene should call 911 and then contact campus security at 919-866-5911. Security will assist the injured party and arrange for the arrival of emergency medical personnel. Security will fill out an incident report and forward to the Director of Security Services for appropriate action.

The decision to call Emergency Medical Services or other medical personnel rests with the Director of Security Services or his/her designee and the injured party. The College will make appropriate efforts to secure transportation for the sick or injured student, employee, or visitor. The College will not transport nor assume responsibility for the transport of other sick or injured persons.

Media Coverage of College Activities
As a public, tax-supported community college, Wake Technical Community College complies with public information law and works with news media to provide coverage of news about the College. Occasionally, media representatives may visit College classrooms to interview and photograph students. The College welcomes these opportunities and respects the rights of students who may not wish to be interviewed or photographed. Students may be excused from classroom activities, without question, while photographs or video images are recorded.

Off-Campus Sites
Many credit and non-credit courses are scheduled at community schools and other locations county-wide. All rules and regulations of Wake Technical Community College apply at off-campus sites in addition to any rules and regulations specified by those sites.

Pets
Pets, including but not limited to dogs and cats, create several conditions the College is not equipped to handle. Pets may carry and spread parasites. Pets of any type may not be brought on campus. This policy is in no way intended to restrict access to the campus for animals specifically trained to aid individuals with disabilities.

Skate Boarding/Rollerblading
Skate boarding and rollerblading are not allowed on any Wake Technical Community College campus or site.

Smoking/Tobacco-Free Campus
Wake Technical Community College recognizes that the use of tobacco products is a health, safety, and environmental hazard for students, employees, visitors, and college facilities. The College believes that the use of tobacco products on college grounds, in college buildings and facilities, on college property, and at college-sponsored events is detrimental to the health and safety of students, employees, and visitors. The College takes seriously its obligation to provide a healthy learning and working environment, free from unwanted smoke and tobacco use, for students, employees, and visitors on the Wake Tech campus.

Policy
No student, employee, or college visitor is permitted to use any tobacco product at any time, including during non-college hours:

- in any building, facility, or vehicle owned or leased by Wake Technical Community College;
- on any college grounds or property – including athletic fields and parking lots – owned or leased by Wake Technical Community College; or
- at any College-sponsored or college-related event, on campus or off campus.

In addition, college employees, college volunteers, contractors, or other persons performing services on behalf of the College also are prohibited from using tobacco products at any time while on duty and in the presence of students, either on or off college grounds.

Further, no student is permitted to possess a tobacco product while in any college building, on college grounds or property, at a college-sponsored or college-related event, or at any other time during which students are under the authority of college personnel.

Tobacco products may be included in instructional or research activities in college buildings if the activity is conducted or supervised by the faculty member overseeing the instruction or research and if the activity does not include smoking, chewing, or otherwise ingesting the tobacco product.

Definitions
For the purposes of this policy, “tobacco products” are defined as cigarettes, cigars, blunts, pipes, chewing tobacco, snuff, and any other items containing or reasonably resembling tobacco or tobacco products. “Tobacco use” includes smoking, chewing, dipping, or any other use of tobacco products.

Signage
Signs shall be posted in a manner and location to provide sufficient notification to students, employees, and visitors of the 100 percent tobacco-free college policy.

Policy Implementation
Wake Tech shall communicate the tobacco-free policy through a comprehensive campaign that shall include printed information in student and employee handbooks, announcements at college-related events, and appropriate signage in buildings and around campus. Likewise, an enforcement protocol, identifying consequences for students, employees, and visitors who violate the policy, shall be created and communicated to all.

Policy Implementation Dates
Northern Wake Campus: August 15, 2007
Health Sciences Campus: January 1, 2008
Plastics Center in Zebulon: January 1, 2008
Public Safety Center: January 1, 2008
Main Campus: August 1, 2008

Tobacco Use Prevention and Cessation
Wake Tech shall encourage students and employees to abstain from and/or cease smoking and the use of tobacco products. In consultation with health agencies, the administration shall offer students and employees information about tobacco and its impact on health and safety as well as access to appropriate support programs and services.

Enforcement
Students: Any student who violates the terms of this policy will receive a reprimand upon his or her first offense. If a second offense occurs, the student will be placed on general probation and required to meet with the Dean of Students. A third offense by the student will incur suspension from the College for three calendar days (weekends and holidays excluded). The student will be suspended for a semester if he or she subsequently violates the terms of the Tobacco-Free Policy.

Employees: Any employee who violates the terms of this policy will receive a written warning upon his or her first offense. If a second offense occurs, the employee will be placed on probation. Any employee who subsequently violates the terms of the Smoking/Tobacco-Free Policy will be terminated..

Student Centers
Student Centers have been established on all Wake Tech campuses to allow students to study, relax, and get refreshments between classes. The centers provide TV, a lounge area, a cafeteria, and other services, depending on the needs of each campus location. Student Centers are located on the Main Campus (Student Services Building), the Northern Wake Campus (Administration Building), the Health Sciences Campus (Health Education Building), and the Public Safety Education Campus.

- All students who use the Student Centers are responsible for keeping them clean and accessible for others. The following guidelines must be observed in the Student Centers.
- No loud voices, electronic devices, or noises of any kind. (Earphones required for electronic devices.)
- No musical instruments unless authorized.
- No profanity.
- Furniture and other furnishings are not to be moved or abused in any way.
- Trash and recyclables are to be placed in appropriate receptacles.

- Shirts and shoes must be worn at all times.

Failure to comply with these guidelines will result in the loss of Student Center privileges for one week. A second offense will result in loss of privileges for one semester.

Telephone Calls

Public telephones are conveniently located on all campuses for students desiring to make telephone calls. A courtesy phone for student use is located on the Main Campus in the Student Services building, in the Student Development Office, 128. On the Northern campus a courtesy phone is located at the front desk in the lobby of Building A.

Students are not permitted to use any other office telephones for personal calls. Since the College does not have access to an intercom system or a messenger service, staff members will not deliver a message to a student unless it is determined to be an emergency. In an emergency, an individual who calls for a student must state the nature of the emergency; someone in Security Services will look up the student's schedule and attempt to contact him/her immediately.

Traffic Rules and Regulations

Ordinance Governing Traffic, Parking, and Registration of Motor Vehicles
Be it resolved that, pursuant to the authority vested in it by Chapter 115D-21 of the General Statutes of North Carolina, the Board of Trustees of Wake Technical Community College adopts and records in its proceedings the following rules governing parking, traffic, and registration of motor vehicles on the campuses of Wake Technical Community College. These regulations are intended only to supplement the Motor Vehicle Laws of North Carolina, all provisions of which, under the terms of the above statute, now apply to the campuses of Wake Technical Community College.Â From the date of filing of these regulations in the Office of the Secretary of State, they shall apply to and be in effect on the streets, roads, alleys, sidewalks, walkways, parking spaces, parking areas, and parking lots on all parts of the campuses of Wake Technical Community College.

Revised June 2011
http://facilities.waketech.edu/parkingtraffic.php

Article I. General Provisions

Section 1. Definitions
Abandoned vehicle: a motor vehicle that has remained parked for more than 10 days, which is determined to be "derelict" under North Carolina General Statute 20-137.7.

Employees: faculty members, administrative staff, clerical personnel, and all other non-student personnel employed by the college (including temporary, permanent, part-time, and full-time employment).

No parking area: any area not specifically marked, striped, or designated for parking.

Parking area: any area specifically set aside, marked, or assigned by Facility Services for the parking of vehicles, either permanently or temporarily.

Repeat offender: any person committing three (3) or more traffic or parking violations within an academic year.

Student: anyone registered or enrolled in full- or part-time academic study who is not an employee.

Visitor: anyone not identified as an employee or student according to the definitions above.

Section 2. Authority
As approved by North Carolina General Statutes, Chapter 115D-21, the Board of Trustees of Wake Technical Community College through their designee, Facility Services, shall be responsible for the registration, flow, and parking of vehicles on property owned or leased in whole or in part by the State of North Carolina and under control of the Board of Trustees of Wake Technical Community College. Notwithstanding the above, the Registrar shall be responsible for the registration of student vehicles. The provisions of the regulations shall apply to the operators of all vehicles operated on any Wake Tech campus and shall be in effect 24 hours a day, except as herein provided.

Wake Tech's **Facility Services Office**, as authorized by this Ordinance and the Board of Trustees, shall exercise discretion and authority in ensuring that the necessary business of the college is conducted properly; and that parking areas and facilities on Wake Tech campuses are used for the benefit and convenience of students, faculty, staff, and visitors.

Liability: Wake Technical Community College assumes no liability or responsibility for damage to or theft of personal property or of any vehicle parked or in operation on the properties leased by or under the control of the Board of Trustees of the College.

Section 3. Violation of Ordinance
In addition to the criminal penalties set out by the North Carolina General Statutes, any person violating this or any regulation issued hereunder is subject to a civil penalty as set forth in this Ordinance.

Rules of Evidence: When a vehicle is found to be in violation of this Ordinance, it shall be considered prima facie evidence that the vehicle was parked:

1. by the person holding the College parking permit for that vehicle, or
2. by the person on file as owner of said vehicle with the North Carolina Division of Motor Vehicles or corresponding agency of another state.

Article II. Vehicle Registration and Parking Permits

Section 1. Permit Eligibility
General Provision: All faculty, staff, and students in good standing with the college are eligible for and may obtain a parking permit. Motor vehicles parked on campus by students, faculty, or staff must be registered with the college and must display a valid, official (Wake Tech-issued) vehicle parking permit.

Handicapped Parking Permits: All faculty, staff, and students in good standing with the college who possess a valid "handicapped placard" or "distinguishing license plate" issued to them pursuant to North Carolina General Statute 20-37.5 are eligible for and must obtain a distinguishable Handicapped Parking Permit from the college, as follows:

1. Complete a Wake Tech **Vehicle Registration** card; and
2. Present the registration card for the handicapped parking placard or distinguishing license plate that has been issued pursuant to North Carolina General Statute 20-37.5

Parking permits become invalid under the following conditions:

- Ownership of the vehicle is transferred to another person or entity.
- The permit holder's association with the college ends.
- The time period for which the permit is issued expires.
- The permit holder is issued another permit relating to the same vehicle.
- The permit holder's parking privileges are forfeited as a result of disciplinary sanctions.
- The permit holder commits three (3) or more traffic or parking violations in an academic year.

Section 2. Registration of Motor Vehicles.
Faculty/Staff vehicles must be registered through the Personnel Records Office. There is no cost to employees for vehicle registration and no limit on the number of vehicles that can be registered.

- **Faculty/Staff parking permits** are for the exclusive use of employees and do not entitle friends or relatives of employees to park in staff spaces, even with the permit. Faculty/Staff parking permits need not be renewed unless worn or illegible.

Student vehicles must be registered as part of the routine college registration process. In order to obtain a parking permit, you will be required to provide your vehicle license plate number and the state in which the vehicle is registered. Vehicles brought onto campus after the college registration period has ended must be registered promptly. Students registered for classes at the Health Sciences Campus must obtain an entry key card for the parking deck.

- **Student parking permits** will be issued in conjunction with student identification badges..

Faculty, staff, and students who have been issued a vehicle registration permit are responsible for parking violations involving the vehicle for which that permit has been issued.

Temporary parking permits must be obtained when a permit holder’s vehicle is unavailable and he/she drives and parks another vehicle on campus.

Parking permits must be properly displayed on the vehicles for which they have been issued. Four-wheel vehicles must display permits on the left side of the rear window; two-wheel vehicle permits must be displayed on the rear of the vehicle.

Visitors (as defined in Article I) to any campus must obtain a temporary parking permit from the reception desk and may park in spaces designated for visitor or general parking only.

Article III. Parking and Traffic Rules and Regulations

Section 1. General Provision

Faculty, staff, and students are subject to discipline in accordance with the provisions of this Ordinance and Wake Tech policy and procedure.

Section 2. Rules and Regulations

- No vehicle shall be driven in a careless or reckless manner or in a direction opposite to that indicated by appropriate signs or markings on roadways that are designated as one-way streets.
- Wake Tech campuses shall be deemed business districts, with a speed limit of 20 miles per hour.
- Vehicles parking in non-parallel parking spaces shall be parked with the front end of the vehicle at the angle to the curb indicated by marking or signs, and no vehicle shall be parked in such a manner as to occupy more than one space.
- All vehicles must park in the direction of the flow of the traffic pattern.
- Vehicles parking in a designated handicapped parking space must display a valid handicapped placard or distinguishable license plate issued to the operator or passenger (pursuant to North Carolina General Statute 20-37.5) and a valid college handicap decal. Any person parking in a designated handicapped parking space must comply with the requirements of North Carolina General Statue 20-37.6, "Parking privileges for handicapped drivers and passengers."
- Parking is prohibited as follows: on a sidewalk or walkway; along the main driveway entering the college; in the driving lanes of parking areas; in loading or unloading areas; in fire lanes; on grass or landscaped areas; in approaches or other portions of parking areas that are not clearly marked for parking.
- No faculty, staff, or student vehicle may be parked in spaces specifically reserved for certain persons or functions.
- Agents authorized by Wake Tech administration have authority to remove to a place of storage or boot any vehicle illegally stopped, parked, or abandoned, at the vehicle owner’s expense.

Section 3. Enforcement

The College shall reserve the right to revoke any parking privileges and to remove a repeat offender's valid parking permit for flagrant violation of the Traffic Rules and Regulations, including failure to pay fines.

Fines

The Accounting Office is hereby authorized to collect a $5 fine for any of the following violations:

- Back-in parking in parking space
- Driving in a hazardous manner
- Driving wrong way in drive lanes
- Failure to display current parking decal
- Failure to register vehicle
- Failure to heed stop or yield sign
- Improper display of parking decal
- Parking in manner creating a hazard
- Parking in more than one parking space
- Parking in non-parking space
- Parking in unauthorized space
- Parking incorrectly in space

The Accounting Office is hereby authorized to collect a **$250.00** fine for violation of handicap parking rules and regulations.

The Accounting Office is hereby authorized to collect a **$50.00** administrative fee for removal of a boot from any vehicle.

Towing
The Director of Security Services is hereby authorized to have towed or place a boot on (or other lawful means of enforcement) any vehicle in violation of rules and regulations, as follows:

- unauthorized parking in a handicapped space
- unauthorized parking in reserved space
- parking in area not designated for parking
- repeated violation of the parking rules
- parking in a manner that creates a hazard
- abandoned vehicles

In addition to any fine assessed for a violation of this Ordinance, the owner of a vehicle that is towed from the College is responsible for payment of any towing and/or storage fee charged for such towing.

Notice of North Carolina State Law Concerning Towed Vehicles
Wake Tech provides a petition/appeal procedure for towing and parking violations.

Additionally, North Carolina G.S. 20-219.11 provides the following:
Whenever a vehicle with a valid registration plate or registration is towed as provided in G.S. 20-219.11, the authorizing person shall immediately notify the last known registered owner of the vehicle of the following:

- a description of the vehicle;
- the place where the vehicle is stored;
- the violation with which the owner is charged, if any;
- the procedure the owner must follow to have the vehicle returned to him; and
- the procedure the owner must follow to request a probable cause hearing on the towing.

The owner or any other person entitled to claim possession of the vehicle may request in writing a hearing to determine if probable cause existed for the towing. The request shall be filed with the magistrate in the county where the vehicle was towed. The magistrate shall set the hearing within 72 hours of his receiving the request.

The only issue at this hearing is whether or not probable cause existed for the towing. If the magistrate finds that probable cause did exist, the tower's lien continues. If the magistrate finds that probable cause did not exist, the tower's lien is extinguished. Any aggrieved party may appeal the magistrate's decision to district court.

For a more complete explanation of the above procedure, refer to North Carolina General Statutes, Chapter 20-219.11.

Section 4. Suspension of Parking Privileges
The Director of Security Services may, in addition to any other penalty, suspend for up to one year the parking privileges of any individual found to be a repeat offender in flagrant violation of this Ordinance.

Section 5. Failure to Settle Fines, Fees, and Charges
Failure to settle outstanding traffic and parking fines, fees, and charges within fourteen days after issuance of a citation may result in the collection of fees in the following manner.

- Penalties owed by faculty members and other employees of the college may be deducted from payroll checks.
- Penalties owed by students will be forwarded to the Registrar and a hold will be placed on the student's records until the penalties are paid.

Section 6. Petition/Appeal Procedure
Individuals issued a parking or traffic citation may appeal by returning a Traffic Violation Appeal form to the Traffic Appeals Review Board within seven (7) calendar days, excluding official college holidays, of the date of the citation. The right to appeal a citation is waived upon expiration of the 7-day period; no untimely appeals will be accepted for review.

Appeal forms are available at the reception desk on all Wake Tech campuses.

Unless otherwise specified in this section, the appeal and all arguments in support of the appeal will be submitted in writing. The Traffic Appeals Review Board Administrator shall review the appeal, considering the written statement of the appellant and relevant documents submitted by the Director of Security Services, and respond by mail to the address provided on the appeal form.

Appeal Hearings
Individuals whose driving or parking privileges are suspended or revoked or whose vehicle is towed will be allowed to appear before the Traffic Appeals Review Board and provide relevant information in addition to the information provided

in writing. A written request for an appeal hearing must be submitted directly to the Director of Security Services and received within 14 days of the date of the decision giving rise to the appeal. The individual will be notified in writing of the hearing date, time, and location. Each person is permitted one continuance of the hearing if he/she is unable to attend on a specified date.

The Traffic Appeals Review Board
The Board will consist of a Traffic Appeals Review Board Administrator, one faculty member, one staff member, and two student members. The President of the Faculty Association will appoint the faculty member. The President of the Staff Council will appoint the staff member. The Student Government Association President will appoint student members. The term of office will be for one year, September to August, with no limit to the number of terms served. Members will serve until successors are appointed. The Director of Security Services or his designee may attend each hearing to clarify any operational questions that may arise.

The Board Administrator will chair the hearing: bring the hearing to order and introduce the appellant, provide written or oral summation of the ruling, disperse completed appeal forms to each member of the board, maintain time restrictions with regard to testimony, dismiss the appellant, and call for a vote from each member of the Board. The Board Administrator will make note of the decision regarding the appeal. The Administrator is a non-voting member of the Board, except when it is necessary to break a tie vote.

The Board will meet as necessary. The Board Administrator is responsible for notifying the appellant and Board members of the time, date, and location of the hearing. In emergency situations (such as a student not being allowed to register for classes or an employee not receiving an employment contract due to pending traffic appeals) and between regularly scheduled meetings of the Traffic Appeals Review Board, the Board Administrator may render decisions on traffic appeals.

Decisions of the Traffic Appeals Review Board are final, except as otherwise provided by college policy and procedure. If an appeal is denied, payment of the fine is due immediately.

Section 7. Judgment Factors

- All facts stated on the appeal form and presented by the appellant.
- Any information provided by the Director of Security Services to include previous violations records.
- Information noted on the parking violation notice.
- The issuing officer's testimony.
- The rules and regulations of this Ordinance.

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

CONTINUING EDUCATION

Website: http://conted.waketech.edu

Basic Skills Program Website: http://basicskills.waketech.edu Dean: Susan Payne Phone: 919-334-1520 Email: sbpayne@waketech.edu 1. Adult Basic Education 2. GED/High School Diploma Equivalency 3. Adult High School Diploma 4. Compensatory Education 5. English as a Second Language	**Evening & Weekend Programs** Website: http://evening.waketech.edu Dean: Pamela Little Phone: 919-866-5805 Email:pmlittle@waketech.edu 1. Occupational Training and Upgrading 2. Wake County Community Schools Program
Bionetwork Capstone Center at (BTEC) Websites: http://www.ncbionetwork.org http://bioworkinfo.waketech.edu Associate Vice President: Anthony Caison Phone: 919-866-6101 Email: amcaison@waketech.edu 1. Bionetwork Capstone Center Short Courses 2. Biowork 3. Validation Academy	**Public Safety & Service Occupations** Website: http://publicsafety.waketech.edu Dean: Anthony Caison Phone: 919- 866-6101 Email: amcaison@waketech.edu 1. Corrections Education 2. Fire Service Training 3. Health Education Training 4. Public Safety and Homeland Security 5. Service Occupations
Business and Industry Services Website: http://bic.waketech.edu Dean: Wayne Loots Phone: 919-335-1001 Email: waloots@waketech.edu 1. Apprenticeship Training 2. Customized Manufacturing & Technology Training Program 3. Management Development Program 4. Small Business Center 5. Wachovia Wells Fargo Center for Entrepreneurship	**Records & Registration** Dean: Margaret Roberton Phone: 919-866-5838 Email: mrroberton@waketech.edu 1. Records 2. Registration 3. Scheduling
Education Services & Technology Website: http://edservtech.waketech.edu Dean: Ray Tims Phone: 919-532-5523 Email: rtims@waketech.edu 1. Non-Credit Computer Education 2. Human Resources Development 3. Spanish Programs 4. IT Related Services	**Community Projects & Educational Programs** Dean: Martha Williams Phone: 919-866-5840 Email: mowillia@waketech.edu 1. Plus-50 Initiative 2. Lateral Entry Program 3. Grants and Special Projects

CONTINUING EDUCATION PURPOSE

Wake Technical Community College plays an active role in the continuing education of the citizens of the Capital area. The College's Continuing Education programs provide courses for those who need to train, retrain, and update themselves in a vocational or professional area, for those who desire instruction enabling them to grow in basic knowledge, improve in home and community life, and develop or improve leisure time activities, and for those individuals whose education stopped short of high school graduation.

CONTINUING EDUCATION UNITS

Wake Technical Community College awards Continuing Education Units (CEU's) for specific non-credit courses and special activities. A permanent transcript will be established for each non-credit student. The transcript will be updated each time the student completes a non-credit course. CEU's will be awarded for non-credit courses satisfactorily completed on the basis of one CEU for each ten hours of instruction. Fractions of CEU's will be awarded. Thus, a 66-hour course will earn 6.6 CEU's. CEU's will not be awarded to students who fail to complete a course satisfactorily.

The Southern Association of Colleges and Schools became the first regional accrediting agency to require that all member institutions use the CEU to document non-credit special activities.

Students who have taken non-credit classes may request copies of their official transcripts by going to http://registration.curred.waketech.edu/transcripts.php.

Unofficial transcripts may be requested by contacting the Continuing Education Registrar at http://conted.waketech.edu/index.php?page=ask.

GRADING POLICY

All classes except Adult High School classes use the S-U system.

Grade	Explanation
S	Satisfactory (attended at least 90% of scheduled class hours)
*U	Unsatisfactory
*NG	No grade
*W	Withdrew

*CEU's are not awarded with these grades.

Adult High School
Adult High School classes use the A-F system.

Grade	Explanation
A (93-100)	Excellent
B (85-92)	Above average
C (78-84)	Average
D (70-77)	Below average
F (0-69)	Unsatisfactory
W	Withdrew
NG	No Grade

ADMISSION & REGISTRATION

Any adult, 18 years of age or older and not enrolled in public school, may be admitted to an adult education class. In extenuating circumstances, and upon the approval of the appropriate public school principal or superintendent, a person 16-18 years of age may enroll in certain courses. For more detailed information regarding the admissions and registration process of minors, please see http://conted.waketech.edu/index.php?page=minors.

A course schedule is published and made available to the public prior to the beginning of each term. Information about all continuing education classes may be obtained by calling the college at (919) 866-5800 or on the web at https://webadvisor.waketech.edu.

CLASS LOCATIONS

All Wake Tech campuses provide numerous continuing education courses and services. Other classes are conducted in surrounding communities or within a particular business or industry in Wake County. Almost any course can and will be organized in other areas of the county when a sufficient number of citizens indicate an interest in having a class brought to a particular location, providing there's an instructor and suitable facility.

OCCUPATIONAL EXTENSION COURSE REPETITION

Legislative requirements state that "students who take an occupational extension course more than twice within a five-year period shall pay their cost for the course based on the amount of funds generated by a student membership hour of occupational extension multiplied by the number of actual hours the class is to be taught." A rate of **$6.19* per scheduled hour** will be charged to those individuals who have taken an occupational extension class more than twice and are not otherwise exempt.

Students may repeat occupational extension course more than once if the repetitions are required for certifications, licensure or recertification.
***Note:** Rate is set by NC Legislators and is subject to change without notice.

COURSE DESCRIPTIONS

Although course descriptions for continuing education courses are not provided in this publication, examples of the types of courses that are offered are listed. Specific course descriptions are furnished upon request. Courses, in addition to those listed in this publication, may be offered to meet expressed needs of the community when evidence of these needs is

presented to the College.

EXPENSES

A registration fee is charged for Community Service and Occupational Continuing Education courses:

Number of Hours	Registration Fee
1-24	$65
25-50	$120
51+	$175

Specific classes may require additional fees including: facility, technology, and/or lab fees.

Self-supporting classes have a pro-rated cost per individual or group and are not waiver eligible.

The registration fee may be waived for students enrolling in specific classes for fire service, rescue, and law enforcement personnel, Wake Technical Community College full-time employees (one course per term), citizens over the age of 65 (one occupational extension course per term), and prison inmates. A registration fee is not charged for Adult Basic Education programs, for preparatory instructional programs for the High School Diploma Equivalency Certificate (GED), for the Adult High School Diploma program, or for English as a Second Language program. There is a $7.50 fee for final GED testing.

WITHDRAWALS & REFUNDS

Refund requests and withdrawals **must** be made in writing by the student (**no exceptions**). Refund request forms are available at each class site. A request for refund may be made by letter.

- A **100% refund** shall be made if the student officially withdraws from the class before the first class meeting by submitting a written request.

- A **75% refund** shall be made if the student officially withdraws from the class prior to or on the 10% date of scheduled hours. Community school, facility, and lab fees are not refundable.

A full refund shall be made for classes canceled by the College. You do not have to request a refund.

TRANSFER POLICY

Transfers to a different course in the same semester are allowed under the following conditions:

1. Neither course has surpassed the census point; and
2. The request does not cross semesters.

Transfer requests must be in writing. Requests received after the 10% deadline will not be considered and a refund will not be processed.

BASIC SKILLS ADMISSION & PLACEMENT POLICY

Wake Tech admits all adults into the College and makes every effort to place students in programs where they can experience success and meet their goals. Basic Skills offers educational opportunities in several areas, including Adult Basic Education (ABE), General Educational Development (GED), Adult High School (AHS), English as a Second Language (ESL), and Compensatory Education (CED). Placement into these programs is determined by standardized assessment tools. If students do not demonstrate progress in their placement level within 50 hours of attendance, they will be moved to another level in Basic Skills or referred to other College programs or an appropriate agency.

Basic Skills Ability to Benefit Policy

Wake Technical Community College offers Adult Basic Education (ABE), General Educational Development (GED), Adult High School (AHS), Compensatory Education (CED), and English as Second Language (ESL) as basic skills programs for adults, 16 or older, who are out of school but do not have a high school diploma; or who have a high school diploma (or its equivalent) but are functioning below high school level.

Adults wishing to enroll in basic skills programs must demonstrate the ability to benefit from the programs by taking the TABE, CASAS, or the BEST, pre-tests approved by the United States Department of Education. Students unable to complete a pre-test may be admitted to the program at a later date, once they have completed it.

According to performance measures outlined in the Workforce Investment Act of 1998, students in basic skills programs must demonstrate “improvements in literacy skills levels in reading, writing, and speaking the English language, numeracy, problem solving, English language acquisition, and other literacy skills.” Improvements should be sufficient to move students to higher levels of educational functioning. Students who do not demonstrate sufficient improvement to move to higher placement levels on the TABE or BEST tests after one year will be dropped from the program and/or referred to more appropriate agencies.

Admission of Minors and Non-High School Graduates

This policy applies to Wake Technical Community College and is in addition to State Board of Community College policies as published in North Carolina Administrative Code, 23 NCAC 2C.0301, Admission to Colleges and 23 NCAC 2C.0305, Education Services for Minors. This policy specifically addresses non-high school graduates' admission into the Basic Skills Program excluding English as a Second Language (ESL):

Non-high school graduates who are 16 or 17 years of age will not be allowed to enroll in the Basic Skills Program before a minimum of six months from the official date of withdrawal from a public or private high school or from a home school program.

The student must exhaust any suspension period given the student by a public or private high school or a home school program in addition to the College's six-month waiting period before being eligible for enrollment in the College's Basic Skills Program.

The Administration of Wake Technical Community College has the express authority of the Board of Trustees to implement necessary procedures for enforcement and regulation of this policy.

BASIC SKILLS PROGRAM

Basic Skills programs include Adult Basic Education, General Educational Development (GED), Adult High School, Compensatory Education, English as a Second Language (ESL), and the High School Equivalency Program (HEP).These programs are offered throughout Wake County for the primary purposes of helping adults:

- Learn to read;
- Improve math, reading, and writing skills;
- Earn a high school diploma or GED high school diploma equivalency;
- Learn English as a second language; and
- Develop basic skills needed in the workplace.

Adult Basic Education

Adult Basic Education is designed to assist individuals who need to improve their skills in reading, writing, and/or mathematics. Instruction covers the fundamentals of mathematics, reading, and oral and written communications.

There are no fees or charges of any kind. All materials have been especially prepared for adults, and instructional plans emphasize individual needs and interests. Students enroll in Adult Basic Education to improve skills for the workplace, achieve personal goals, or prepare for enrollment in one of the College's high school completion programs. Classes are offered on the main campus, at the Adult Education Center, and at community sites throughout Wake County.

General Educational Development (GED)

The General Educational Development program offers instruction for adults who are preparing for the GED exam. Instruction covers high school level reading, writing, mathematics, science, and social studies skills. Students may prepare for the exam on the main campus, at the Adult Education Center, at a community site, or by enrolling in Wake Tech's online GED program. Tuition is free, and course materials are provided for students.

Those achieving a passing score on all five sections of the GED exam receive a high school equivalency diploma from the North Carolina State Board of Community Colleges. The GED is generally recognized as a high school equivalency for purposes of college admission and employment.

Students enrolled in the GED program who demonstrate GED test readiness by passing two official GED practice tests in each of the five test areas, may be signed up to take GED tests at one of the two GED Testing Centers on the main campus and at the Adult Education Center. Students are required to pay a one-time-only fee of $7.50 when they take the official GED exam. There is an additional $2.50 fee for retesting on the Writing portion of the exam.

Adult High School Diploma

The Adult High School Diploma is offered through a cooperative agreement between Wake Tech and the Wake County Board of Education, with the College serving as the administering agency. Adult High School provides academic courses in a lab setting or online setting. Students are placed in English, mathematics, social studies, science, and elective courses based on their high school transcripts and scores on a standard battery of tests.
The Adult High School diploma is offered at the Adult Education Center. Upon completion of "job connection activities" (activities designed specifically for the students to complete, which are related to exploring work, school, or military opportunities) and the required credits, students are awarded an adult high school diploma.

Compensatory Education

Compensatory Education is for adults with intellectual disabilities or Traumatic Brain Injury (TBI) who want to achieve a higher level of independence by focusing on academic, social, vocational and life skills to fulfill their goals. The Compensatory Education program is available year-round. There are no fees for classes; however documentation of an

intellectual disability or TBI is required. For more information or to make an appointment for orientation and testing, call 919-334-1507.

Compensatory Education Ability to Benefit Policy
The Wake Technical Community College Compensatory Education program (CED) is an educational program specifically designed for adults 17 years of age and older with intellectual disabilities. These adults may not have attended public schools, attended on a limited basis, or may simply need additional educational opportunities after leaving public school.

All interested participants must demonstrate the ability to benefit from the program by being able to take the CASAS pre-test. Students unable to complete the pre-test will be admitted to the program at a future date once they are able to complete the pre-test.

An outcome for students participating in a Basic Skills program, according to the Workforce Investment Act of 1998, is to have demonstrated achievement of a goal from the State Mandated Compensatory Education Program of Study in Language, Math, Social Science, Community Living, Consumer Education, Health, or Vocational Education.
CED students who cannot demonstrate a goal achievement within two program years will be referred to more appropriate agencies or dropped from the program.

English As A Second Language
English as a Second Language (ESL) is designed for persons whose native language is not English. The program focuses on English for life skills, such as filling out forms or seeking medical attention, and helps parents navigate the public school system. ESL classes encourage participants to improve their level of communication, with emphasis on speaking, listening, reading, and writing skills. Instructors assist students in pre-employment preparation, community interaction, cultural enrichment, and professional and academic advancement.

ESL classes are offered free of charge at the Adult Education Center and at various locations throughout the county.

High School Equivalency Program
The High School Equivalency Program (HEP) is funded by a grant from the U.S. Department of Education, Migrant Education Division, for the purpose of providing migrant and seasonal farm workers and their families the instruction needed to obtain a GED (high school equivalency certificate). The program is administered by Wake Tech in collaboration with other service organizations in the community.

BIONETWORK CAPSTONE CENTER AT BTEC

The **BioNetwork Capstone Center** provides affordable, high-quality, hands-on training in biotechnology, biomanufacturing, and biopharmaceutical/pharmaceutical operations in a simulated industrial (cGMP) environment. The Capstone Center is also home to the **Validation Academy**, which provides training and education in the philosophies and skills of validation.

Importantly, short-course training (1-5 days) at the Capstone Center is carried out by highly qualified professionals with extensive experience in the biopharmaceutical/biomanufacturing industry.

The Capstone Center is situated in the **Golden LEAF Biomanufacturing Training and Education Center (BTEC)** on the Centennial Campus of North Carolina State University. Built in 2007 at a cost exceeding $38 million, the BTEC is the largest facility of its kind in the nation. It provides a training environment that mirrors a biomanufacturing plant facility. The Capstone Center's training facilities within BTEC include state-of-the-art classrooms, laboratories, and a certified cleanroom suite.

The Capstone Center serves:
- Incumbent workers
- New hires
- Workers in job transition
- Community college and college students enrolled in the life sciences, especially those in biotechnology-related degree and certificate programs, providing an invaluable extended hands-on learning experience
- College/university and community college faculty.

Eight certificates are offered by the BioNetwork Capstone Center, including four in biomanufacturing, one in analytical lab skills, and three in validation:
- BioWork Certificate (Bioprocessing Technician)
- Certificate in Biomanufacturing
- Certificate in Analytical Lab Skills
- Certificate for Instrumentation/Calibration Technicians in Support of Biomanufacturing
- Certificate for Maintenance Technicians in Support of Biomanufacturing
- Certificate in Computer Validation
- Certificate for Validation Specialists - Levels I and II

Course offerings focus upon a variety of critical skill sets within areas important to biomanufacturing: good manufacturing practices (cGMP), aseptic manufacturing, operations in biotechnology processes, industrial microbiology, good laboratory practices, analytical operations, and validation.

BUSINESS & INDUSTRY SERVICES

In today's fast-paced digital economy, businesses must seek new knowledge and leverage new technologies if they are to survive and grow. The Business and Industry Services Division serves the lifelong learning needs of the business community.

The Business and Industry Center (BIC) is located at the Western Wake Campus in Cary where it provides classes and seminars. It also offers customized employee training at employer sites as well as other area locations, including our new Northern Campus.

Apprenticeship Training
Wake Tech has been designated by the North Carolina Community College System as a center for formal apprenticeship training. The College assists companies that are participating in a customized apprenticeship training program by providing the related classroom instruction.

Focused Industrial Training (FIT)
Wake Tech assists area industries in training and retraining employees with courses that range from basic fundamental skills to sophisticated technical skills to skills in supervision, management, PLC, CNC, Six Sigma, Lean Manufacturing, Welding, Electricity and more.

Customized Training Program (CIT)
The customized training program supports the economic development efforts of the State by providing training assistance for eligible business and industries. This enhances 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.

Professional Development and Corporate Training
To meet the supervisory and managerial needs of business and industry, Wake Tech offers management development programs in sales training, computer skills, problem solving, office occupations, project management, import logistics and international marketing.

Small Business Center (SBC)
Wake Tech's Small Business Center (SBC) works to increase the success rate and number of viable small businesses in North Carolina by providing high quality, readily accessible assistance to prospective and existing small business owners and their employees. The Small Business Center provides education and training, information, and referral.

The Small Business Center has a library of printed materials available to assist with small business research and problem solving. The library includes books, pamphlets, magazines, trade journals, and a wide variety of tapes and videos.

Confidential counseling services and access to resource libraries are free of charge along with seminars and workshops.

EDUCATION SERVICES & TECHNOLOGY

Human Resources Development (HRD) Job Skills
Human Resources Development (HRD) provides assessment services, employability training, and career development counseling to unemployed and underemployed individuals, ages 18 and older, to prepare them for success in the workplace. Training focuses on helping students obtain and perform successfully in entry-level jobs. Training is based on national skills standards, assessments, and certifications that enhance participants' ability to compete effectively in the high-tech, high-performance, global economy. Courses are designed to enhance students' skills and improve their employment opportunities. Class length and times vary.

The Employability Skills Training Component is the centerpiece around which the other four HRD core training components revolve. This training component is broken down into five subsets: Job Preparation, Job-Seeking Skills, Job-Keeping Skills, Lifelong Learning, and Life Skills.

Noncredit Computer Education Department
The goals of the Noncredit Computer Education Department are to enrich personal and workplace computer skills and to enhance opportunities for employment and job advancement.
The department consists of continuing education classes taught at various campus sites, including the State Personnel Development Center (SPDC), and online, such as Education-to-Go (ed2go).

Spanish Programs
The Spanish Program Department provides language instruction for students at all levels, from beginner to advanced level. The goal is to build language skills for personal enrichment and enhance employment opportunities in various fields of work. Classes from beginning Spanish to advanced immersion are available to help students improve and develop understanding and communication. The Spanish Programs also offer basic computer skills, sewing, cake decorating, and other classes in Spanish to meet the needs and interests of the Hispanic/Latino population.

Command Spanish, one of the programs offered by the Spanish Programs Department, is non-grammar based training designed to provide employers a practical way to provide professional development for their employees. The program helps employees learn and use limited amounts of everyday Spanish. The training is offered at Wake Tech locations and is also provided on site at businesses and organizations, during day or evening hours.

EVENING & WEEKEND PROGRAMS

Wake County Community School Program
The goal of Community Schools is to make quality educational and recreational experiences available in convenient locations at reasonable costs. Through interagency cooperation a variety of offerings are provided for the general public. Wake Technical Community College actively supports and participates in this program by offering numerous credit and continuing education courses at local schools four evenings per week

Occupational Training and Upgrading
An ongoing priority of Wake Technical Community College is to offer evening and weekend programs that provide non-credit courses appropriate to the needs of the working adult. These programs focus on assisting adult students, who attend primarily part-time, in developing new skills to obtain employment or to change career paths, and on helping students upgrade their skills to maintain employment. Programs for personal development are also offered in the evening.

Occupational training and upgrading courses provide training for specific job skills essential to successful employment.

New skills are taught and present skills are updated in order to make an employee more efficient on the job, to improve the chances for advancement to a new job, or to meet legislated requirements. The following are examples of the large variety of courses offered for this purpose:

- Automotive Repair
- Building Trades
- Business Management
- Computer Skills
- Electrical-Electronics Trade
- Foreign Languages
- Internet-based Instruction
- Machine Trades & Welding
- Medical Terminology, Coding, and Transcription
- Plumbing
- Real Estate Updates

Evening Curriculum Program Offerings

For detailed information concerning Wake Tech's Evening Program offerings, refer to those sections of this catalog that contain descriptions of the day offerings. Current curriculum programs offered in the evening and on Saturdays include:

1. College/University Transfer
2. General Education
3. Associate in Applied Science Diplomas
4. Preparatory Courses

Weekend Programs
- Computer Programming:
- Internet Programming
- Visual Basic Programming
- Early Childhood Credential Courses
- Information Systems: Networking
- Networking Technology: MCSE
- Visual Basic Certificate

Assorted courses from other curricula are also offered evenings and Saturdays.

PUBLIC SAFETY & SERVICE OCCUPATIONS DIVISION

The following program areas provide training to public safety personnel and to persons who wish to increase their individual competencies in specialized occupational areas.

Health Education Services
Courses are designed to meet the needs of local EMS agencies, healthcare providers, and the public with emphasis on emergency patient care in traditional pre-hospital and nontraditional environments. Health education courses are also designed to assist individuals desiring employment or retraining in health institutions or related fields.

Fire Service Training
Fire Service Training is delivered directly to individual fire departments. Training held in local fire departments allows personnel to utilize equipment they will actually use in controlling fires. Fire Service classes include:

- Arson and Unlawful Burning
- Fire Apparatus Practices
- Fire Fighting Practices
- Forcible Entry
- Hazardous Materials
- Ladder Practices
- Portable Fire Extinguishers
- Protective Breathing Equipment
- Rescue Practices
- Rope Practices
- Salvage and Overhaul Practices
- The Company Officer
- Ventilation

Related courses in Fire Service Training include industrial brigade training, home fire safety, search, and rescue.

Service Occupations
This program trains individuals in the area of food service, lodging, travel information, and nursing assistant. The primary objectives include providing employers with well-trained personnel to operate their business and developing individuals with skills that will qualify them for better employment opportunities. Hospitality training is arranged and scheduled in accordance with the needs of the industry.

Corrections Education
Corrections Education is delivered to immured individuals in Wake County's judicial system. The primary purpose of the training is to increase the safety of the general public by reducing the recidivism rate through training. Vocational training is also provided in the areas of plumbing, electrical wiring, heating and air conditioning and carpentry.

Public Safety And Homeland Security
Public Safety and Homeland Security courses are designed as in-service and pre-service education for those engaged in law enforcement activities and are provided at the request of these agencies. Program emphasis is on legal and technological law enforcement advancements. Courses such as the following are offered in many areas:

- Child Passenger Safety Training
- Community Policing
- Criminal Investigation
- Domestic Disturbance Response
- D.W.I. Detection
- Effective Report Writing
- Firearms Training
- First-Line Supervision
- Homeland Security
- Juvenile Law
- Laws of Arrest, Search, and Seizure
- Motor Vehicle Laws
- Narcotics Investigation
- Radar Certification
- Spanish for Law Enforcement
- Traffic Accident Investigation

Community Projects & Educational Programs

Plus-50 Initiative
Plus-50 is a program for adults 50 and over, designed to support wellness, lifelong learning, and "creative retirement" through a variety of classes offered at the Western Wake Campus of Wake Technical Community College. This program is for "baby boomers" who are getting ready to retire or want to transition from their current careers to a new "encore" career. Participants will learn how to translate previous successes into service to the community by working in leadership roles in the non-profit sector. Encore classes and workshops include human services, retirement planning, health care, and others.

Lateral Entry Program
Lateral Entry is an alternative route to obtaining a North Carolina teaching license. Eligible individuals must have completed a Bachelor's degree (at least 2.5 GPA) and have 24 credit hours completed in the subject area they wish to teach.

Wake Tech offers several Lateral Entry competencies through curriculum and continuing education courses.

RECORDS & REGISTRATION

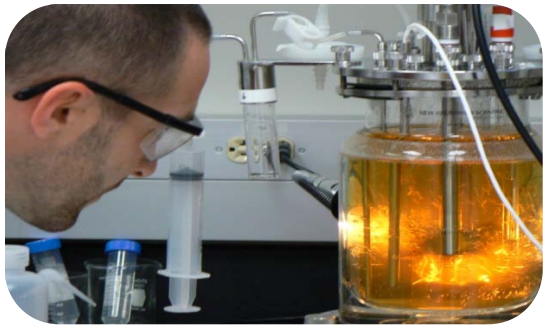
This department ensures accuracy and quality in all Continuing Education programs to comply with the NC General Statues, Title 23 of the NC Administrative Code, Continuing Education Guidelines, Numbered Memoranda and the Colleges' Accountability and Credibility Plan in all of Continuing Education registration and reporting processes.

WE ARE HERE TO HELP!

Location
Main Campus (401 South) in Holding Hall, Room 131

Phone
919- 866-5800

Website
http://conted.waketech.edu/



Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

CURRICULUM EDUCATION (FOR CREDIT): PROGRAMS OF STUDY

Degrees, Diplomas, and Certificates

Wake Technical Community College awards degrees, diplomas, and certificates in a variety of fields shown below. The highest credential given in each area is listed first, in bold type.

The "Program Offered" column represents when the program is offered:

D = Day
E = Evening
O = Distance learning or Online learning

Division To Contact	Program Name	Program Offered	Program Code
Business Technologies	**Accounting – *AAS Degree***	D, E	A25100
	Accounting **– *Diploma***	D, E, O	D25100
	Accounting: Core **– *Certificate***	D, E, O	C25100C
	Income Tax Preparer **– *Certificate***	D, E, O	C25100B
	Payroll Accounting Clerk **- *Certificate***	D, E, O	C25100A
Computer and Engineering Technology (CET)	**Advertising and Graphic Design – *AAS Degree***	D, E	A30100
	Digital Media **– *Certificate***	D	C30100C
	Graphics and Design **– *Certificate***	O	C30100A
	Web and Graphic Design **- *Certificate***	O	C30100B
Applied Technologies	**Air Conditioning, Heating, and Refrigeration Technology – *AAS Degree***	D	A35100
	Air Conditioning, Heating, and Refrigeration Technology **- *Diploma***	D, E	D35100A
	Air Conditioning, Heating, and Refrigeration Technology **- *Certificate***	D, E, O	C35100B
	Commercial **- *Certificate***	D, E, O	C35100C
	Design **- *Certificate***	D, E, O	C35100D
CET	**Architectural Technology – *AAS Degree***	D	A40100
	Architectural CAD **- *Certificate***	D, E	C40100A
Health Sciences	**Associate Degree Nursing – *AAS Degree***	D	A45110
	Associate Degree Nursing (LPN to RN Advanced Placement Option) **– *AAS Degree***	D	A45110
College Transfer	**Associate in Arts – *AA Degree***	D, E, O	A10100
	Diploma in Arts	D, E, O	D10100
General Education	**Associate in General Education – *A.G.E. Degree***	D, E	A10300
College Transfer	**Associate in Science – *AAS Degree***	D, E	A10400
	Diploma in Science	D, E	D10400
CET	**Associate in Science (Pre-Major: Engineering) – *AS Degree***	D, E	A1040D
Applied Technologies	**Automotive Systems Technology – *AAS Degree***	D	A60160
Business Technologies	**Baking and Pastry Arts – *AAS Degree***	D	A55130
	Baking and Pastry Arts **– *Diploma***	D	D55130
	Baking and Pastry Arts **- *Certificate***	D	C55130A
Applied Technologies	**Basic Law Enforcement Training - *Certificate***	D, E	C55120
CET	**BioPharmaceutical Technology – *AAS Degree***	D	A20180
	Applied Biotechnology **- *Certificate***	D	C20180A
Business Technologies	**Business Administration – *AAS Degree***	D, E	A25120
	Business Core **– *Certificate***	D, E, O	C25120D
	Career Success **– *Certificate***	D, E, O	C25120G
	Customer Service **– *Certificate***	D, E	C25120B
	E-Commerce **– *Certificate***	O	C25120E
	Entrepreneurship **– *Certificate***	D	C25120C
	Leadership **- *Certificate***	D, E, O	C25120F
	Sales Development **- *Certificate***	D, E	C25120A
Business Technologies	**Business Administration/Human Resources Management – *AAS Degree***	D, O	A2512C
	Business Administration/Human Resources Administration **- *Certificate***	O	C2512CB
	Business Administration/Human Resources Management: Core **- *Certificate***	O	C2512CA
CET	**Civil Engineering Technology – *AAS Degree***	D, E	A40140
	Civil Design **- *Certificate***	D, E	C40140A

CURRICULUM EDUCATION (FOR CREDIT): PROGRAMS OF STUDY

Division To Contact	Program Name	Program Offered	Program Code
Health Sciences	**Computed Tomography Technology** - ***Certificate***	D	C45200
CET	**Computer Engineering Technology** – ***AAS Degree***	D, E	A40160
	C Language Programming - ***Certificate***	D, E	C40160B
CET	**Computer Information Technology** – ***AAS Degree***	D, E	A25260
	Computer Forensics - ***Certificate***	D, E	C25260J
	Hardware Troubleshooting - ***Certificate***	D, E	C25260G
	Healthcare Informatics - ***Certificate***	D, E, O	C25260N
	IT Foundations - ***Certificate***	D, E, O	C25260M
	IT Support Management - ***Certificate***	D, E	C25260L
	IT Support Technician - ***Certificate***	D, E	C25260K
	Microsoft Application Specialist (MCAS) - ***Certificate***	D, E, O	C25260A
	Open Source IT - ***Certificate***	D, E, O	C25260O
	Spreadsheet Specialist - ***Certificate***	D, E, O	C25260E
CET	**Computer Programming** – ***AAS Degree***	D, E, O	A25130
	C++ Programming – ***Certificate***	D, E, O	C25130C
	JAVA Programming – ***Certificate***	D, E, O	C25130A
	Visual BASIC Programming – ***Certificate***	D, E, O	C25130B
	Visual C# Programming - ***Certificate***	D, E, O	C25130C
Applied Technologies	**Construction Management Technology** – ***AAS Degree***	D	A35190
	Construction Management Technology: Basic - ***Certificate***	D, E, O	C35190C
Applied Technologies	**Cosmetology** – ***AAS Degree***	D	A55140
	Cosmetology - ***Diploma***	D, E	D55140A
Business Technologies	**Criminal Justice Technology** – ***AAS Degree***	D, E, O	A55180
	Principles of Correction - ***Certificate***	D, O	C55180A
Business Technologies	**Criminal Justice Technology/Latent Evidence** – ***AAS Degree***	D	A5518A
	Principles of Identification and Information - ***Certificate***	D, O	C5518A
Business Technologies	**Culinary Arts** – ***AAS Degree***	D	A55150
	Culinary Arts – ***Diploma***	D	D55150
	Culinary Arts - ***Certificate***	D, E	C55150A
CET	**Database Management** – ***AAS Degree***	D, E	A25150
	Oracle DBA Programming – ***Certificate***	D, E, O	C25150B
	Oracle Developer - ***Certificate***	D, E, O	C25150A
Health Sciences	**Dental Assisting - Diploma**	D	D45240
Health Sciences	**Dental Hygiene – AAS Degree**	D	A45260
Business Technologies	**Early Childhood Education** – ***AAS Degree***	D, E	A55220
	Early Childhood Education – ***Diploma***	D, E	D55220A
	ECE Administrators – ***Certificate***	D, E	C55220A
	ECE and CDA – ***Certificate***	D, E	C55220D
	Family Child Care - ***Certificate***	D, E	C55220F
	Infant/Toddler Care and CDA - ***Certificate***	D	C55220C
	School Age – ***Certificate***	D, E	C55220E
Applied Technologies	**Electric Lineman Technology** – ***AAS Degree****	Nash CC	A35210
Applied Technologies	**Electrical/Electronics Technology** – ***AAS Degree***	D	A35220
	Electrical/Electronics Technology – ***Diploma***	D	D35220A
	Wiring Methods and the NEC - ***Certificate***	D, E, O	C35220D
CET	**Electronics Engineering Technology** – ***AAS Degree***	D, E	A40200
	Basic Electronics – ***Certificate***	D, E	C40200A
	PLC Programming – ***Certificate***	D, E	C40200B
	Robotics - ***Certificate***	D, E	C40200C
Health Sciences	**Emergency Medical Science** – ***AAS Degree***	D	A45340
CET	**Environmental Science Technology** – ***AAS Degree***	D	A20140
Applied Technologies	**Esthetics Technology** - ***Certificate***	D, E	C55230
Business Technologies	**Fire Protection Technology** – ***AAS Degree***	D, E, O	A55240
	Fire Protection Technology: Basic – ***Certificate***	D, O	C55240A
	Loss Control/Investigation – ***Certificate***	D	C55240B
	Fire Management - ***Certificate***	D	C55240C
Business Technologies	**Food Service Technology** – ***Diploma***	**Prison Only**	D55250
	Food Service Technology - ***Certificate***	**Prison Only**	C55250
Health Sciences	**General Occupational Technology** – ***AAS Degree***	D, E	A55280

CURRICULUM EDUCATION (FOR CREDIT): PROGRAMS OF STUDY

Division To Contact	Program Name	Program Offered	Program Code
Business Technologies	**Global Logistics Technology – *AAS Degree***	O	A25170
	Global Logistics Technology: Basic **– *Certificate***	O	C25170A
	Distribution Management **- *Certificate***	O	C25170B
Applied Technologies	**Heavy Equipment and Transport Technology/Agricultural Systems – *AAS Degree***	D	A6024A
Applied Technologies	**Heavy Equipment and Transport Technology/Construction Equipment Systems – *AAS Degree***	D	A6024B
	Heavy Equipment and Transport Technology/Construction Equipment Systems **- *Diploma***	D	D6024BA
	Fuel Injection, Electrical, and Electronics **– *Certificate***	D, E, O	C6024BC
	Hydraulics, Engines, and Transmissions **- *Certificate***	D, E, O	C6024BB
Business Technologies	**Hospitality Management – *AAS Degree***	D	A25110
	Hospitality Management **– *Diploma***	D	D25110
	Entrepreneur **– *Certificate***	D	C25110C
	Event Management **– *Certificate***	D	C25110A
	Hotel Management **– *Certificate***	D	C25110B
	Restaurant Management **- *Certificate***	D	C25110D
Health Sciences	**Human Services Technology – *AAS Degree***	D, E	A45380
	Human Services Technology: Basic **– *Certificate***	D, E	C45380
	Services for the Aging **- *Certificate***	D, E	C45380B
Health Sciences	**Human Services Technology/Substance Abuse – *AAS Degree***	D, E	A4538E
	Substance Abuse **- *Certificate***	D, E	C4538E
CET	**Industrial Engineering Technology – *AAS Degree***	D, E	A40240
	Advanced Quality **– *Certificate***	D, E, O	C40240C
	Industrial Management **– *Certificate***	D, E, O	C40240A
	Manufacturing Process Control **- *Certificate***	D, E, O	C40240D
	Quality Assurance **- *Certificate***	D, E, O	C40240B
CET	**Information Systems Security – *AAS Degree***	D, E	A25270
	Network Security Admin **- *Certificate***	D, E	C25270A
CET	**Interior Design – *AAS Degree***	E	A30220
CET	**Landscape Architecture Technology – *AAS Degree***	D	A40260
	Landscape Architecture **- *Certificate***	D	C40260A
Business Technologies	**Lateral Entry - *Certificate***	D	C55430
Applied Technologies	**Machining Technology - *Certificate***	E	C50300B
Health Sciences	**Magnetic Resonance Imaging - *Diploma***	D	D45800
Applied Technologies	**Mechanical Drafting Technology – *AAS Degree***	D	A50340
	Mechanical Drafting Technology **– *Diploma***	D	D50340A
	Mechanical Drafting Technology **- *Certificate***	D, E	C50340B
CET	**Mechanical Engineering Technology – *AAS Degree***	D, E	A40320
	Engineering Fundamentals **– *Certificate***	D, E, O	C40320F
	Engineering Management **– *Certificate***	D, E, O	C40320E
	Materials Engineering **– *Certificate***	D, E, O	C40320D
	Mechanical Design **– *Certificate***	D, E, O	C40320B
	Thermal Mechanics **- *Certificate***	D, E, O	C40320C
Health Sciences	**Medical Assisting – *AAS Degree***	D	A45400
	Medical Assisting **- *Diploma***	D	D45400
Health Sciences	**Medical Laboratory Technology – *AAS Degree***	D	A45420
Business Technologies	**Medical Office Administration – *AAS Degree***	O	A25310
	Medical Office Administration **– *Diploma***	O	D25310
	Medical Document Specialist **– *Certificate***	O	C25310C
	Medical Office Specialist **- *Certificate***	O	C25310A
CET	**Networking Technology – *AAS Degree***	D, E	A25340
	Cisco Certified Network Associate (CCNA) **- *Certificate***	D, E	C25340C
	Cisco Certified Network Professional (CCNP) **- *Certificate***	D, E	C25340I
	Linux/Red Hat Administration **- *Certificate***	D, E	C25340K
	Microsoft Certified Systems Administrator (MCSA) **- *Certificate***	D, E, O	C25340J

CURRICULUM EDUCATION (FOR CREDIT): PROGRAMS OF STUDY

Division To Contact	Program Name	Program Offered	Program Code
Business Technologies	**Office Administration – *AAS Degree***	O	A25370
	Office Administration **– *Diploma***	O	D25370
	Office Specialist **– *Certificate***	O	C25370A
	Word Processing & Publications **- *Certificate***	O	C25370B
Business Tech	**Office Administration/Legal – *Certificate***	O	C2637AA
Health Sciences	**Pharmacy Technology – *AAS Degree****	D	A45580
	Pharmacy Technology **– *Diploma****	D	D45580
Health Sciences	**Phlebotomy - *Certificate***	D	C45600
Applied Technologies	**Plumbing - *Diploma***	D	D35300
	Applications and Diagrams **– *Certificate***	D, E	C35300A
	Modern Plumbing Codes and Blueprint Reading **– *Certificate***	D	C35300B
Health Sciences	**Radiography – AAS Degree**	D	A45700
CET	**Simulation and Game Development – *AAS Degree****	D, E	A25450
	Game Programming and Design **– *Diploma***	D, E	D25450A
	Modeling and Animation **– *Diploma***	D, E	D25450B
	Modeling and Animation **– *Certificate***	D, E	C25450A
	Production **- *Certificate***	D, E	C25450B
CET	**Surveying Technology – *AAS Degree***	D, E	A40380
Health Sciences	**Surgical Technology - *Diploma***	D	D45740
Health Sciences	**Therapeutic Massage - *Diploma***	D	D45750
CET	**Web Technologies – *AAS Degree***	D, O	A25290
	Mobile Content Development **- *Diploma***	D, O	D25290
	Android Application Developer **- *Certificate***	O	C25290E
	E-Commerce Programming **- *Certificate***	O	C25290B
	iOS Application Developer **- *Certificate***	O	C25290D
	Web Designer **- *Certificate***	O	C25290C
	Web Developer **- *Certificate***	O	C25290A
Applied Technologies	**Welding Technology – *Diploma***	D	D50420
	Welding Technology **- *Certificate***	E	C50420B

***Collaborative Agreements**

Electric Lineman Technology AAS degree – Collaborative Agreement with Nash Community College

Simulation and Game Development AAS degree – Level III instruction Service Agreement with Pitt Community College, Nash Community College, Wayne Community College, and Wilson Community College

Pharmacy Technology AAS Degree and **Pharmacy Technology Diploma** with Johnston Community College

Special Notes

Students should contact their advisors for updates to program offerings. Students admitted to programs that require a clinical or co-op component may be required to provide the college with an official criminal background check in order to meet the requirements of the clinical or co-op site. Convictions for certain crimes and/or evidence of drug use may disqualify students for participating in clinical or co-op experiences, which would limit their progress toward graduation.

The length of our programs is set by the North Carolina Community College System and published in thei North Carolina Community College System Curriculum Procedures Reference Manual. Program length (degrees, diplomas, certificates) is the same regardless of the mode (traditional-seated, online, or hybrid) of instructional delivery and must follow the standards established by the North Carolina Community College System. Website: http://curred.waketech.edu/

Applied Technologies

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The table below shows the current degrees, diplomas, and certificates the Applied Technologies division offers. The highest credential given in each area is listed first, in bold type.

The "Program Offered" column represents when the program is offered:

D = Day
E = Evening
O = Distance learning or Online learning

Program Name	Program Offered	Program Code
Air Conditioning, Heating, and Refrigeration Technology – ***AAS Degree***	D	A35100
Air Conditioning, Heating, and Refrigeration Technology ***- Diploma***	D, E	D35100A
Air Conditioning, Heating, and Refrigeration Technology ***- Certificate***	D, E, O	C35100B
Commercial ***- Certificate***	D, E, O	C35100C
Design ***- Certificate***	D, E, O	C35100D
Automotive Systems Technology – ***AAS Degree***	D	A60160
Basic Law Enforcement Training ***- Certificate***	D, E	C55120
Construction Management Technology – ***AAS Degree***	D	A35190
Construction Management Technology: Basic ***- Certificate***	D, E, O	C35190C
Cosmetology – ***AAS Degree***	D	A55140
Cosmetology ***- Diploma***	D, E	D55140A
Electric Lineman Technology – ***AAS Degree****	Nash CC	A35210
Electrical/Electronics Technology – ***AAS Degree***	D	A35220
Electrical/Electronics Technology ***– Diploma***	D	D35220A
Wiring Methods and the NEC ***- Certificate***	D, E, O	C35220D
Esthetics Technology ***- Certificate***	D, E	C55230
Heavy Equipment and Transport Technology – ***AAS Degree***	D	A60240
Heavy Equipment and Transport Technology/Agricultural Systems – ***AAS Degree***	D	A6024A
Heavy Equipment and Transport Technology/Construction Equipment Systems – ***AAS Degree***	D	A6024B
Heavy Equipment and Transport Technology/Construction Equipment Systems ***- Diploma***	D	D6024BA
Fuel Injection, Electrical, and Electronics ***– Certificate***	D, E, O	C6024BC
Hydraulics, Engines, and Transmissions ***- Certificate***	D, E, O	C6024BB
Machining Technology ***- Certificate***	E	C50300B
Mechanical Drafting Technology – ***AAS Degree***	D	A50340
Mechanical Drafting Technology ***– Diploma***	D	D50340A
Mechanical Drafting Technology ***- Certificate***	D, E	C50340B
Plumbing ***- Diploma***	D	D35300
Applications and Diagrams ***– Certificate***	D, E	C35300A
Modern Plumbing Codes and Blueprint Reading ***– Certificate***	D	C35300B
Welding Technology ***– Diploma***	D	D50420
Welding Technology ***- Certificate***	E	C50420B

***Collaborative Agreements**
Electric Lineman Technology AAS degree – Collaborative Agreement with Nash Community College

Air Conditioning, Heating, and Refrigeration Technology

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.

AAS degree graduates should be able to assist in the start up, preventive maintenance, service, repair, and/or installation of residential and light commercial systems and. should be able to demonstrate an understanding of system selection and balance and advanced systems.

AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY - A35100

General Education Courses

ENG	110	Freshman Composition	3
COM	120	Interpersonal Communication	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

AHR	110	Introduction to Refrigeration	5
AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	4
AHR	113	Comfort Cooling	4
AHR	114	Heat Pump Technology	4
AHR	115	Refrigeration Systems	2
AHR	130	HVAC Controls	3
AHR	133	HVAC Servicing	4
AHR	151	HVAC Duct Systems I	2
AHR	160	Refrigerant Certification	1
AHR	180	HVAC Customer Relations	1
AHR	210	Residential Building Code	2
AHR	211	Residential System Design	3
AHR	212	Advanced Comfort Systems	4
AHR	215	Commercial HVAC Controls	2
AHR	225	Commercial System Design	3
AHR	240	Hydronic Heating	2
AHR	245	Chiller Systems	2
AHR	250	HVAC System Diagnostics	2
AHR	263	Energy Management	2

Graduation Requirements.....71 Credit Hours

AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY - D35100A

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. AAS degree graduates should be able to demonstrate an understanding of system selection and balance and advanced systems.

General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

AHR	110	Introduction to Refrigeration	5
AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	4
AHR	113	Comfort Cooling	4
AHR	114	Heat Pump Technology	4
AHR	115	Refrigeration Systems	2
AHR	130	HVAC Controls	3
AHR	133	HVAC Servicing	4
AHR	151	HVAC Duct Systems I	2
AHR	160	Refrigerant Certification	1
AHR	210	Residential Building Code	2

Graduation Requirements ..... 40 Credit Hours

AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY - C35100B

Topics include mechanical refrigeration, heating and cooling theory, electricity, controls, and safety. The certificate program covers air conditioning, furnaces, tools, and instruments.
Certificate graduates should be able to assist in the start up, preventive maintenance, service, repair, and/or installation of residential systems.

AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	4
AHR	113	Comfort Cooling	4
AHR	130	HVAC Controls	3
AHR	133	HVAC Servicing	4

Completion Requirements..... 18 Credit Hours

COMMERCIAL - C35100C

The Air Conditioning, Heating, and Refrigeration Technology Commercial Certificate is designed for individuals wishing to learn about commercial AHR systems. Topics covered in this certificate program include basic refrigeration processes used in mechanical refrigeration and air conditioning systems, electricity, the fundamentals of heating, hydronic heating systems, and the fundamentals of liquid chilling equipment. Certificate graduates should be able to assist in the start up, preventive maintenance, service, repair, and installation of commercial systems.

AHR	110	Introduction to Refrigeration	5
AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	4
AHR	160	Refrigeration Certification	1
AHR	180	HVAC Customer Relations	1
AHR	240	Hydronic Heating	2
AHR	245	Chiller Systems	2

Completion Requirements..... 18 Credit Hours

DESIGN - C35100D

The Air Conditioning, Heating, and Refrigeration Technology Design Certificate is designed for individuals interested in the basics of how to design residential and commercial AHR systems. Topics include building codes, principles and concepts of conventional residential heating and cooling system design, principles of designing heating and cooling systems for commercial buildings, and common business and customer relation practices. Certificate graduates should be able to assist in the design of residential and commercial AHR systems, and the mechanical codes that apply toward system installation.

AHR	112	Heating Technology	4
AHR	113	Comfort Cooling	4
AHR	160	Refrigeration Certification	1
AHR	180	HVACR Customer Relations	1
AHR	210	Residential Building Codes	2
AHR	211	Residential System Design	3
AHR	225	Commercial System Design	3

Completion Requirements..... 18 Credit Hours

Automotive Systems Technology

The Automotive Systems Technology curriculum prepares individuals for employment as automotive service technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field.

Classroom and lab experiences integrate technical and academic coursework. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/ transaxles, engine repair, climate control, and manual drive trains.

Upon completion of this curriculum, students should be prepared to take the ASE exam and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

AUTOMOTIVE SYSTEMS TECHNOLOG - A60160

General Education Courses

COM	120	Interpersonal Communication	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

AUT	116	Engine Repair	3
AUT	116A	Engine Repair Lab	1
AUT	123	Powertrain Diagn & Serv	2
AUT	141	Suspension & Steering Sys	3
AUT	141A	Suspension & Steering Lab	1
AUT	151	Brake Systems	3
AUT	151A	Brake Systems Lab	1
AUT	161	Basic Auto Electricity	5
AUT	163	Adv Auto Electricity	3
AUT	163A	Adv Auto Electricity Lab	1
AUT	171	Auto Climate Control	4
AUT	181	Engine Performance 1	3
AUT	183	Engine Performance 2	4
AUT	213	Automotive Servicing 2	2
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

Major Electives

Select 2 hours from the following courses

AUT	114	Safety and Emissions	2
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience II	2
COE	121	Co-op Work Experience I	1

Graduation Requirements ..... 65 Credit Hours

Basic Law Enforcement Training

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.

Students must successfully complete and pass all units of study that include the certification examination mandated by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriffs' Education and Training Standards Commission to receive a certificate.

BASIC LAW ENFORCEMENT TRAINING - C55120

CJC	100	Basic Law Enforcement Training	19

Completion Requirements ..... 19 Credit Hours

Construction Management Technology

The Construction Management Technology curriculum is designed to provide training for persons interested in project management and other related positions in the construction industry.

Coursework focuses on such topics as construction materials, methods and techniques of modern construction, building codes, contractor licensing law, contractor business law, OSHA and safety on the construction site, project management, project scheduling, project costs and productivity, residential and commercial estimating, residential and commercial blueprint reading, and human relations issues in the construction industry.

Graduates should quality for entry-level positions as project manager assistants, site superintendents, construction foremen, building inspectors, estimators, and other construction management-related jobs.

CONSTRUCTION MANAGEMENT TECHNOLOGY - A35190

General Education Courses

COM	120	Intro Interpersonal Com	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

ACC	120	Prin of Financial Acct	4
BPR	130	Blueprint Reading/Const	2
BPR	230	Commercial Blueprints	2
CIS	111	Basic PC Literacy	2
CMT	112a	Construction Mgt I-Part 1	3
CMT	112b	Construction Mgt I-Part 2	3
CMT	120	Codes and Inspections	3
CMT	210	Prof Construction Superv	3
CMT	212	Total Safety Performance	3
CMT	214	Planning and Scheduling	3
CMT	216	Costs and Productivity	3
CMT	218	Human Relations Issues	3
CST	241	Planning/Estimating I	3
CST	242	Planning/Estimating II	4
CST	244	Sustainable Blgd Design	3
SST	110	Intro to Sustainability	3

Major Electives
Select 3 hours from the following courses

CMT	226	Applications Project	3
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience II	1
COE	122	Co-op Work Experience II	2
COE	131	Co-op Work Experience III	1
COE	132	Co-op Work Experience III	2

Graduation Requirements.....66 Credits Hours

CONSTRUCTION MANAGEMENT TECHNOLOGY: BASIC CERTIFICATE – C35190C

The Construction Management Technology Basic Certificate is designed for individuals already in the construction industry who want to study the basic principles of construction management. Topics include safety/OSHA regulations and compliance, residential and commercial blueprint reading, project planning and scheduling, human relations, issues, and professional construction supervision.

Individuals who complete this certificate will have taken an essential step in the process of qualifying as a construction project manager, superintendent, foreman, or estimator.

BPR	130	Blueprint Reading/Cost	2
BPR	230	Commercial Blueprints	2
CMT	210	Professional Construction Supervision	3
CMT	212	Total Safety Performance	3
CMT	214	Planning and Scheduling	3
CMT	218	Human Relations Issues	3

Completion Requirements .....16 Credit Hours

Cosmetology

The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics.

Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and related businesses.

COSMETOLOGY - A55140

General Education Courses

COM	120	Interpersonal Communication	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

COS	111	Cosmetology Concepts I	4
COS	112	Salon I	8
COS	113	Cosmetology Concepts II	4
COS	114	Salon II	8
COS	115	Cosmetology Concepts III	4
COS	116	Salon III	4
COS	117	Cosmetology Concepts IV	2
COS	118	Salon IV	7
COS	193	Selected Topics in Cosmetology	3
COS	224	Trichology & Chemistry	2
COS	240	Contemporary Design	2
COS	250	Computerized Salon Ops	1

Graduation Requirements..... 65 Credit Hours

COSMETOLOGY - D55140A

The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics.

Diploma graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and related businesses.

General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

COS	111	Cosmetology Concepts I	4
COS	112	Salon I	8
COS	113	Cosmetology Concepts II	4
COS	114	Salon II	8
COS	115	Cosmetology Concepts III	4
COS	116	Salon III	4
COS	117	Cosmetology Concepts IV	2
COS	118	Salon IV	7

Graduation Requirements..... 47 Credit Hours

Electrical/Electronics Technology

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 Electrical 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.

ELECTRICAL/ELECTRONICS TECHNOLOGY - A35220

General Education Courses

COM	120	Interpersonal Communications	3
ENG	110	Freshman Composition	3

HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

CIS	111	Basic PC Literacy	2
ELC	112	DC/AC Electricity	5
ELC	113	Basic Wiring I	4
ELC	114	Basic Wiring II	4
ELC	115	Industrial Wiring	4
ELC	117	Motors and Controls	4
ELC	118	National Electrical Code	2
ELC	119	NEC Calculations	2
ELC	121	Electrical Estimating	2
ELC	126	Electrical Computations	3
ELC	128	Introduction to PLC	3
ELC	134	Transformer Applications	2
ELN	133	Digital Electronics	4
ELN	229	Industrial Electronics	4
ISC	112	Industrial Safety	2

Major Electives

Select 2 hours from the following courses

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience II	2
COE	121	Co-op Work Experience I	1
ELC	229	Applications Project	2

Graduation Requirements ..... 65 Credit Hours

ELECTRICAL/ELECTRONICS TECHNOLOGY- D35220A

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 Electrical Code, and other subjects as local needs require.

Diploma 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

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

ELC	112	DC/AC Electricity	5
ELC	113	Basic Wiring I	4
ELC	114	Basic Wiring II	4
ELC	115	Industrial Wiring	4
ELC	117	Motors and Controls	4
ELC	118	National Electrical Code	2
ELC	119	NEC Calculations	2
ELC	126	Electrical Computations	3
ELC	128	Introduction to PLC	3
ELC	134	Transformer Applications	2
ELN	229	Industrial Electronics	4

Graduation Requirements ..... 43 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

WIRING METHODS AND THE NEC – C35220D

The Wiring Methods and the NEC Certificate is designed to provide training for those interested in the installation and maintenance of electrical systems found in residential and commercial facilities.

Training, most of which is hands-on, will include such topics as basic residential and commercial wiring practices, the National Electrical Code, and other subjects as local needs require.

Certificate graduates should qualify for a variety of jobs in the electrical field as an on-the-job trainee or apprentice assisting in the layout, installation, and maintenance of residential and commercial electrical systems.

ELC	113	Basic Wiring I	4
ELC	114	Basic Wiring II	4
ELC	118	National Electrical Code	2
ELC	119	NEC Calculations	2

Completion Requirements ..... 12 Credit Hours

Esthetics Technology

The Esthetics Technology curriculum provides competency-based knowledge, scientific/artistic principles and hands-on fundamentals associated with the art of skin care. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional Esthetics Technology, business/human relations, product knowledge, and other related topics.

Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and cosmetic/skin care salons, as a platform artist, and in related businesses.

ESTHETICS TECHNOLOGY - C55230

Major Courses

COS	119	Esthetics Concepts I	2
COS	120	Esthetics Salon I	6
COS	125	Esthetics Concepts II	2
COS	126	Esthetics Salon II	6

Completion Requirements ..... 16 Credit Hours

Heavy Equipment & Transport Technology

The Heavy Equipment and Transport Technology curriculum is designed to provide individuals with the knowledge and skills needed to troubleshoot and repair medium- and heavy-duty vehicles.

The core course work includes the theory of operations, troubleshooting techniques, and repair procedures for engines, electrical, and hydraulic systems. Other courses cover transmissions, brakes, and steering/suspension. Additional related courses will be required.

Graduates of the curriculum should qualify for entry-level employment opportunities at businesses that repair medium- and heavy-duty vehicles. Entry and advancement levels depend on the amount of training completed, knowledge and ability levels, work performance, and ethics.

APPLIED TECHNOLOGIES

HEAVY EQUIPMENT AND TRANSPORT TECHNOLOGY - A60240

General Education Courses

COM	120	Interpersonal Communication	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

ELC	127	Software for Technicians	2
HET	110	Diesel Engines	6
HET	112	Diesel Electrical Systems	5
HET	114	Power Trains	5
HET	116	Air Conditioning/Diesel Equipment	2
HET	120	Introduction to Mobile Equipment	2
HET	134	Mechanical Fuel Injection	3
HET	231	Medium/Heavy Duty Brake System	2
HET	232	Medium/Heavy Duty Brake System Lab	1
HET	233	Suspension and Steering	4
HYD	134	Hydraulic/Hydrostatic Construction	4
MEC	111	Machine Processes I	3
PME	211	Advanced Equipment Repair	4
PME	221	Construction Equipment Servicing	2
WLD	112	Basic Welding Processes	2

Major Electives

Select 5 hours from the following courses

ELN	112	Diesel Electronics System	4
ELN	113	Electronic Fuel Injection	2
HET	115	Electronic Engines	3
HET	128	Medium/Heavy Duty Tune-up	2
HET	192	Selected Topics in Heavy Equipment and Transport Technology	2

Hydraulics Electives

Select one of the following courses

HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Medium/Heavy Duty	2

Co-op Electives

Select 2 hours from the following courses

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience II	1

Graduation Requirements ..... 72 Credit Hours

Heavy Equipment & Transport Technology/Agricultural Systems

Agricultural Systems is a concentration under the curriculum title of Heavy Equipment and Transport Technology. This curriculum is designed to provide individuals with the knowledge and skills needed to repair agricultural equipment.

The course work includes diesel engines, power trains, hydraulics, electrical systems, and fuel systems. Other topics include time management, inventory, and parts control.
Graduated of the curriculum should qualify for entry-level employment opportunities in a dealership as technicians qualified to be contributing members of the work team.

HEAVY EQUIPMENT AND TRANSPORT TECHNOLOGY/ AGRICULTURAL SYSTEMS - A6024A

General Education Courses

COM	120	Intro Interpersonal Com	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

ELC	127	Software for Technicians	2
HET	110	Diesel Engines	6
HET	112	Diesel Electrical Systems	5
HET	114	Power Trains	5
HET	116	Air Cond/Diesel Equip	2
HET	120	Intro to Mobile Equipment	2
HET	134	Mechanical Fuel Injection	3
HET	211	Ag Harvesting Equipment	4
HET	217	Tractor Performance	2
HYD	134	Hyd/Hydrostatic Const	4
PME	111	Planters and Sprayers	4
PME	112	Consumer Products	4
PME	121	Component Controls	3
WLD	112	Basic Welding Processes	2

Major Electives

Select 4 hours from the following courses

ELN	112	Diesel Electronics System	4
ELN	113	Electronic Fuel Injection	2
HET	115	Electronic Engines	3
HET	128	Med/Heavy Duty Tune-up	2
HET	192	Selected Topics in Heavy Equipment and Transport Technology	2

Hydraulics Electives

Select 2 hours from the following courses

HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Med/Heavy Duty	2

Co-op Electives

Select 2 hours from the following courses

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience II	1

Graduation Requirements ..... 72 Credit Hours

Heavy Equipment & Transport Technology/ Construction Equipment Systems

Construction Equipment Systems is a concentration under the curriculum title of Heavy Equipment and Transport Technology. This curriculum is designed to provide individuals with the knowledge and skills needed to troubleshoot and repair construction equipment systems. Construction equipment includes dozers, scrapers, loaders, and forklifts.

The core course work includes the theory of operations, troubleshooting techniques, and repair procedures for engines and electrical and hydraulics systems. The concentration courses will include transmissions, brakes, undercarriage, and equipment repair. Other related courses will be required.

Graduates of the curriculum should qualify for entry-level employment opportunities at businesses that repair construction equipment. Entry and advancement levels depend on the amount of training completed, knowledge and ability levels, work performance, and ethics.

HEAVY EQUIPMENT AND TRANSPORT TECHNOLOGY/CONSTRUCTION EQUIPMENT SYSTEMS - A6024B

General Education Courses

COM	120	Interpersonal Communication	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

ELC	127	Software for Technicians	2
HET	110	Diesel Engines	6
HET	112	Diesel Electrical Systems	5
HET	114	Power Trains	5
HET	116	Air Conditioning/Diesel Equipment	2
HET	134	Mechanical Fuel Injection	3
HYD	134	Hydraulic/Hydrostatic Construction	4
MEC	111	Machine Processes I	3
PME	113	Construction Equipment Repair	2
PME	117	Equipment Braking Systems	3
PME	118	Undercarriage Components	2
PME	211	Advanced Equipment Repair	4
PME	221	Construction Equipment Servicing	2
WLD	112	Basic Welding Processes	2

Major Electives

Select 6 hours from the following courses

ELN	112	Diesel Electronics System	4
ELN	113	Electronic Fuel Injection	2
HET	115	Electronic Engines	3
HET	128	Medium/Heavy Duty Tune-up	2
HET	192	Selected Topics in Heavy Equipment and Transport Technology	2

Hydraulics Electives

Select one of the following courses

HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Medium/Heavy Duty	2

Co-op Electives

Select 2 hours from the following courses

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience II	1

Graduation Requirements ..... 71 Credit Hours

HEAVY EQUIPMENT AND TRANSPORT TECHNOLOGY/ CONSTRUCTION EQUIPMENT SYSTEMS - D6024BA

General Education Courses

ENG	110	Freshman Composition	3
PHY	121	Applied Physics I	4

Major Courses

ELC	127	Software for Technicians	2
HET	110	Diesel Engines	6
HET	112	Diesel Electrical Systems	5
HET	114	Power Trains	5
HET	134	Mechanical Fuel Injection	3
HYD	134	Hydraulic/Hydrostatic Construction	4
PME	113	Construction Equipment Repair	2
PME	117	Equipment Braking Systems	3
PME	118	Undercarriage Components	2

Major Electives

Select 6 hours from the following courses

ELN	112	Diesel Electronics System	4
ELN	113	Electronic Fuel Injection	2
HET	115	Electronic Engines	3
HET	128	Medium/Heavy Duty Tune-up	2
HET	192	Selected Topics in Heavy Equipment and Transport Technology	2

Hydraulics Elective

Select one of the following courses

HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Medium/Heavy Duty	2

Graduation Requirements ..... 47 Credit Hours

FUEL INJECTION, ELECTRICAL, & ELECTRONICS – C6024BC

The Fuel Injection, Electrical, and Electronics certificate curriculum is under **Heavy Equipment and Transport Technology/ Construction Equipment Systems**. This certificate curriculum is designed to provide individuals with the knowledge and skills needed to troubleshoot and repair fuel injection, electrical, and electronic systems in construction equipment. Construction equipment includes dozers, scrapers, loaders, and forklifts.

The core course work includes the theory of operations, troubleshooting techniques, and repair procedures for electrical and electronic systems. The concentration courses will also include fuel injection systems.

Graduates of the curriculum should qualify for entry-level employment opportunities at businesses, which repair construction equipment. Entry and advancement levels depend on the amount of training completed, knowledge and ability levels, work performance, and ethics.

Major Courses

HET	112	Diesel Electrical System	5
HET	134	Mechanical Fuel Injection	3

Major Electives

Select 4 hours from the following courses

ELN	112	Diesel Electronics System	4
ELN	113	Electronic Fuel Injection	2
HET	115	Electronic Engines	3
HET	128	Medium/Heavy Duty Tune-up	2
HET	192	Selected Topics in Heavy Equipment and Transport Technology	2

Completion Requirements ..... 12 Credit Hours

HYDRAULICS, ENGINES, AND TRANSMISSIONS - C6024BB

The Hydraulics, Engines, and Transmissions certificate is under the **Heavy Equipment and Transport Technology/ Construction Equipment Systems curriculum**. This certificate is designed to provide individuals with the knowledge and skills needed to troubleshoot and repair hydraulics, engines, and transmissions in construction equipment.

The core course work includes the theory of operations, troubleshooting techniques, and repair procedures for engines and

hydraulics systems. The concentration courses will also include transmissions.

Graduates of the curriculum should qualify for entry-level employment opportunities at businesses, which repair construction equipment. Entry and advancement levels depend on the amount of training completed, knowledge and ability levels, work performance, and ethics.

Major Courses

HET	110a	Diesel Engines Part 1	4
HET	110b	Diesel Engines Part 2	2
HET	114	Power Trains	5
HYD	111	Mobile Hydraulic Systems	3
or			
HYD	112	Hydraulic/Pneumatics II	2

Completion Requirements .....13 Credit Hours

Machining Technology

The Machining Technology certificate is designed to develop basic skills in the theory and safe use of hand tools, power machinery, computerized equipment, and precision inspection instruments.

Students will learn to interpret blueprints, set up manual and CNC machines, perform basic machining operations, and make decisions to insure that work quality is maintained.

Employment opportunities exist in manufacturing industries, public institutions, governmental agencies, and in a wide range of specialty machining job shops.

MACHINING TECHNOLOGY - C50300B

Major Courses

BPR	111	Blueprint Reading	2
MAC	111a	Machining Technology I-Part 1	3
MAC	111b	Machining Technology I-Part 2	3
MAC	121	Introduction to CNC	2
MAC	151	Machining Calculations	2
MAC	229	CNC Programming	2

Completion Requirements .....14 Credit Hours

Mechanical Drafting Technology

The Mechanical Drafting Technology curriculum prepares technicians to produce drawings of mechanical parts, components of mechanical systems, and mechanisms. CAD and the importance of technically correct drawings and designs based on current standards are emphasized.

Course work includes mechanical drafting, CAD, and proper drawing documentation. Concepts such as machine shop processes, basic materials, and physical sciences as they relate to the design process are also included. The use of proper dimensioning and tolerance techniques is stressed.

Graduates should qualify for employment in mechanical areas such as manufacturing, fabrication, research and development, and service industries.

MECHANICAL DRAFTING TECHNOLOGY -A50340

General Education Courses

COM	120	Interpersonal Communications	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

DDF	211	Design Drafting I	4
DDF	221	Design Drafting Project	2
DFT	111	Technical Drafting I	2
DFT	111A	Technical Drafting I Lab	1
DFT	112	Technical Drafting II	2
DFT	112A	Technical Drafting II Lab	1
DFT	115	Architectural Drafting	2
DFT	121	Introduction to GD and T	2
DFT	151	CAD I	3
DFT	152	CAD II	3
DFT	153	CAD III	3
DFT	154	Intro to Solid Models/Rendering	3
DFT	214	Descriptive Geometry	2
DFT	221	Electrical Drafting	4
ISC	112	Industrial Safety	2
ISC	128	Industrial Leadership	2
ISC	132	Manufacturing Quality Control	3
MAC	151	Machining Calculations	2
MEC	111	Machine Processes I	3
MEC	141	Introduction to Manufacturing Processes	3
MEC	145	Mfg Materials I	3

Major Electives

Select 2 hours from the following courses

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience II	1
DFT	119	Basic CAD	2

Completion Requirements.....70 Credit Hours

MECHANICAL DRAFTING TECHNOLOGY -D50340A

The Mechanical Drafting Technology diploma curriculum prepares technicians to produce drawings of mechanical parts, components of mechanical systems, and mechanisms. CAD and the importance of technically correct drawings and designs based on current standards are emphasized.

General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

DDF	211	Design Drafting I	4
DDF	221	Design Drafting Project	2
DFT	111	Technical Drafting I	2
DFT	111A	Technical Drafting I Lab	1
DFT	112	Technical Drafting II	2
DFT	112A	Technical Drafting II Lab	1
DFT	121	Introduction to GD and T	2
DFT	151	CAD I	3
DFT	152	CAD II	3
DFT	153	CAD III	3
DFT	154	Intro to Solid Models/Rendering	3
DFT	214	Descriptive Geometry	2
ISC	132	Manufacturing Quality Control	3
MEC	111	Machine Processes I	3
MEC	141	Introduction to Manufacturing Processes	3

Major Electives

Select 2 hours from the following courses

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2

COE	121	Co-op Work Experience II	1
DFT	119	Basic CAD	2

Graduation Requirements ..... 45 Credit Hours

MECHANICAL DRAFTING TECHNOLOGY - C50340B

The Mechanical Drafting Technology certificate curriculum prepares technicians to produce drawings of mechanical parts and components of mechanical systems. CAD and the importance of technically correct drawings and designs based on current standards are emphasized.

Course work includes mechanical drafting, CAD, and proper drawing documentation. The use of proper dimensioning and tolerance techniques is stressed.

Graduates should qualify for employment in mechanical areas such as manufacturing, fabrication, research and development, and service industries requiring entry-level drafting and CAD skills.

Major Courses

DFT	111	Technical Drafting I	2
DFT	111A	Technical Drafting I Lab	1
DFT	151	CAD I	3
DFT	152	CAD II	3
DFT	153	CAD III	3

Completion Requirements ..... 12 Credit Hours

Plumbing

The Plumbing curriculum is designed to give individuals the opportunity to acquire basic skills to assist with the installation and repair of plumbing systems in residential and small buildings.

Course work includes sketching diagrams, interpretation of blueprints, and practices in plumbing assembly. Students will gain knowledge of state codes and requirements.

Graduates should qualify for employment at parts supply houses, maintenance companies, and plumbing contractors to assist with various plumbing applications.

PLUMBING - D35300

General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

BPR	130	Blueprint Reading/Construction	2
PLU	110	Modern Plumbing	9
PLU	120	Plumbing Applications	9
PLU	130	Plumbing Systems	6
PLU	140	Introduction to Plumbing Codes	2
PLU	150	Plumbing Diagrams	2
PLU	192	Selected Topics in Plumbing	2
WLD	112	Basic Welding Processes	2

Graduation Requirements ..... 40 Credit Hours

PLUMBING APPLICATIONS AND DIAGRAMS -C35300A

The Plumbing certificate curriculum is designed to give individuals the opportunity to acquire basic skills to assist with the installation and repairs of plumbing systems in residential and small buildings.

Course work includes interpretation of blueprints and practices in plumbing assembly. Students will be introduced to State Codes and requirements.

Graduates should qualify for entry-level employment at parts supply houses, maintenance companies, and plumbing contractors to assist with various plumbing applications.

Major Courses

PLU	120	Plumbing Applications	9
PLU	140	Introduction to Plumbing Codes	2
PLU	192	Selected Topics in Plumbing	2
WLD	112	Basic Welding Processes	2

Completion Requirements ..... 15 Credit Hours

MODERN PLUMBING, CODES, AND BLUEPRINT READING - C35300B

The Plumbing certificate curriculum is designed to give individuals the opportunity to acquire basic skills to assist with the installation and repairs of plumbing systems in residential and small buildings.

Course work includes sketching diagrams, interpretation of blueprints, and practices in plumbing assembly. Students will gain additional knowledge of State Codes and requirements.

Graduates should qualify for employment at parts supply houses, and for entry-level positions with maintenance companies and plumbing contractors to assist with various plumbing applications.

Major Courses

BPR	130	Blueprint Reading/Construction	2
PSY	118	Interpersonal Psychology	3
PLU	110	Modern Plumbing	9
PLU	150	Plumbing Diagrams	2

Completion Requirements ..... 16 Credit Hours

Welding Technology

The Welding Technology curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in the welding and metal industry.

Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses in math, blueprint reading, metallurgy, welding inspection, and destructive and non-destructive testing provides the student with industry-standard skills developed through classroom training and practical application.

Successful graduates of the Welding Technology diploma 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.

WELDING TECHNOLOGY - D50420

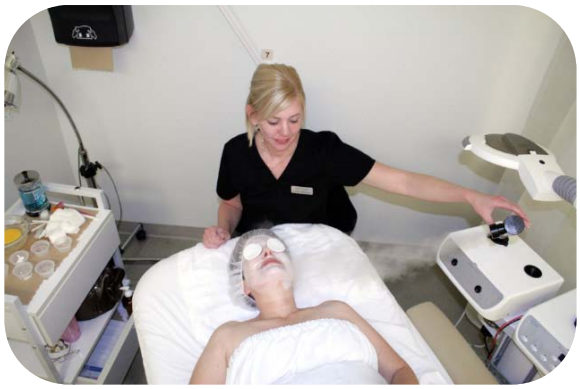
General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

WLD	110	Cutting Processes	2
WLD	115	SMAW (Stick) Plate	5
WLD	116	SMAW (Stick) Plate/Pipe	4
WLD	121	GMAW (MIG) FCAW/Plate	4
WLD	131	GTAW (TIG) Plate	4
WLD	132	GTAW (TIG) Plate/Pipe	3
WLD	141	Symbols and Specifications	3

WLD 151 Fabrication I.....4
WLD 261 Certification Practices.....2
Graduation Requirements.....37 Credit Hours



WELDING TECHNOLOGY - C50420B

Instruction includes an introduction to consumable and non-consumable electrode welding and cutting processes. Additional courses in blueprint reading, metallurgy, and destructive testing provides the student with industry-standard skills developed through classroom training and practical application.

Successful graduates of the Welding Technology certificate curriculum may be employed as entry-level technicians in welding and metalworking industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, and welding-related self-employment.

Major Courses
WLD 115 SMAW (Stick) Plate-Part 1.....5
WLD 131 GTAW (TIG) Plate.....4
WLD 141 Symbols and Specifications.....3
Completion Requirements .....12 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

Business Technologies

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The table below shows the current degrees, diplomas, and certificates the Business Technologies division offers. The highest credential given in each area is listed first, in bold type.

The "Program Offered" column represents *when* the program is offered:

D = Day
E = Evening
O = Distance learning or Online learning

Program Names	Program Offered	Program Code
Accounting – ***AAS Degree***	D, E	A25100
Accounting ***– Diploma***	D, E, O	D25100
Accounting: Core ***– Certificate***	D, E, O	C25100C
Income Tax Preparer ***– Certificate***	D, E, O	C25100B
Payroll Accounting Clerk ***- Certificate***	D, E, O	C25100A
Baking and Pastry Arts – ***AAS Degree***	D	A55130
Baking and Pastry Arts ***– Diploma***	D	D55130
Baking and Pastry Arts ***- Certificate***	D	C55130A
Business Administration – ***AAS Degree***	D, E	A25120
Business Core ***– Certificate***	D, E, O	C25120D
Career Success ***– Certificate***	D, E, O	C25120G
Customer Service ***– Certificate***	D, E	C25120B
E-Commerce ***– Certificate***	O	C25120E
Entrepreneurship ***– Certificate***	D	C25120C
Leadership ***- Certificate***	D, E, O	C25120F
Sales Development ***- Certificate***	D, E	C25120A
Business Administration/Human Resources Management – ***AAS Degree***	D, O	A2512C
Business Administration/Human Resources Administration ***- Certificate***	O	C2512CB
Business Administration/Human Resources Management: Core ***- Certificate***	O	C2512CA
Criminal Justice Technology – ***AAS Degree***	D, E, O	A55180
Principles of Correction ***- Certificate***	D, O	C55180A
Criminal Justice Technology/Latent Evidence – ***AAS Degree***	D	A5518A
Principles of Identification and Information ***- Certificate***	D, O	C5518A
Culinary Arts – ***AAS Degree***	D	A55150
Culinary Arts ***– Diploma***	D	D55150
Culinary Arts ***- Certificate***	D, E	C55150A
Early Childhood Education – ***AAS Degree***	D, E	A55220
Early Childhood Education ***– Diploma***	D, E	D55220A
ECE Administrators ***– Certificate***	D, E	C55220A
ECE and CDA ***– Certificate***	D, E	C55220D
Family Child Care ***- Certificate***	D, E	C55220F
Infant/Toddler Care and CDA ***- Certificate***	D	C55220C
School Age ***– Certificate***	D, E	C55220E
Fire Protection Technology – ***AAS Degree***	D, E, O	A55240
Fire Protection Technology: Basic ***– Certificate***	D, O	C55240A
Loss Control/Investigation ***– Certificate***	D	C55240B
Fire Management ***- Certificate***	D	C55240C
Food Service Technology – ***Diploma***	**Prison Only**	D55250
Food Service Technology ***- Certificate***	**Prison Only**	C55250
Global Logistics Technology – ***AAS Degree***	O	A25170
Global Logistics Technology: Basic ***– Certificate***	O	C25170A
Distribution Management ***- Certificate***	O	C25170B

BUSINESS TECHNOLOGIES

Program Names Continued	Program Offered	Program Code
Hospitality Management – ***AAS Degree***	D	A25110
Hospitality Management ***– Diploma***	D	D25110
Entrepreneur ***– Certificate***	D	C25110C
Event Management ***– Certificate***	D	C25110A
Hotel Management ***– Certificate***	D	C25110B
Restaurant Management ***- Certificate***	D	C25110D
Lateral Entry ***- Certificate***	D	C55430
Medical Office Administration – ***AAS Degree***	O	A25310
Medical Office Administration ***– Diploma***	O	D25310
Medical Document Specialist ***– Certificate***	O	C25310A
Medical Office Specialist ***- Certificate***	O	C25310C
Office Administration – ***AAS Degree***	O	A25370
Office Administration ***– Diploma***	O	D25370
Office Specialist ***– Certificate***	O	C25370A
Word Processing & Publications ***- Certificate***	O	C25370B
Office Administration/Legal – ***Certificate***	O	C2637AA

***Collaborative Agreements**

None at this time

BUSINESS TECHNOLOGIES

Accounting

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, 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.

ACCOUNTING - A25100

-Day and Evening

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	115	Mathematical Models	3
PSY	118	Interpersonal Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	122	Principles of Financial Accounting II	3
ACC	129	Individual Income Taxes	3
ACC	130	Business Income Taxes	3
ACC	140	Payroll Accounting	2
ACC	150	Accounting Software Applications	2
ACC	215	Ethics in Accounting	3
ACC	220	Intermediate Accounting I	4
ACC	221	Intermediate Accounting II	4
ACC	268	Information Systems and Internal Controls	3
		OR	
ACC	269	Auditing	3
BUS	115	Business Law I	3
CIS	111	Basic PC Literacy	2
ECO	151	Survey of Economics	3
		Major Elective List I	5
		Major Elective List II	8

Major Elective List I (Fall Semester)

Select 5 Hours from the following courses:

ACC	131	Federal Income Taxes	3
ACC	132	NC Business Taxes	2
ACC	149	Introduction to Accounting Spreadsheets	2
ACC	180	Practices in Bookkeeping	3
ACC	225	Cost Accounting	3
ACC	226	Adv Managerial Acct	3
ACC	227	Practices in Accounting	3
ACC	240	Gov & Not-for-Profit Acct	3
ACC	250	Adv Accounting	3
BUS	121	Business Math	3
BUS	225	Business Finance	3
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2

Major Elective List II (Spring Semester)

Select 8 Hours from the following courses:

ACC	131	Federal Income Taxes	3
ACC	132	NC Business Taxes	2
ACC	149	Introduction to Accounting Spreadsheets	2
ACC	151	Acct Spreadsheet Appl	2
ACC	152	Advanced Software Applications	2
ACC	170	Technical Accounting	3
ACC	180	Practices in Bookkeeping	3
ACC	225	Cost Accounting	3
ACC	226	Adv Managerial Acct	3
ACC	227	Practices in Accounting	3
ACC	240	Gov & Not-for-Profit Acct	3
ACC	250	Adv Accounting	3
BUS	121	Business Math	3
BUS	225	Business Finance	3
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience II	1

Graduation Requirements ..... 71 Credit Hours

ACCOUTING DIPLOMA - D25100

-Day, Evening, and Online

The Accounting Diploma provides students with a basic accounting skill set and overall knowledge enhanced by selected accounting electives and a potential cooperative education experience. After the Accounting Diploma is started, a student may elect to pursue an A.A.S Degree in Accounting or after the Accounting Diploma is awarded, a student may return to Wake Tech to earn an A.A.S. Degree in Accounting.

The curriculum is designed to provide students with the knowledge and skills necessary for employment and growth in the accounting profession. Diploma graduates should be able to pursue a variety of entry-level accounting positions in private industry, accounting firms, and government agencies. In order to complete the diploma program in three semesters, the program must begin in the summer semester.

General Education Courses

ENG	111	Expository Writing	3
PSY	150	General Psychology	3

Major Courses

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	129	Individual Income Taxes	3
ACC	140	Payroll Accounting	2
ACC	149	Intro to Accounting Spreadsheets	2
ACC	150	Accounting Software Applications	2
BUS	115	Business Law I	3
BUS	121	Business Math	3
CIS	111	Basic PC Literacy	2
		Electives	5

Select a minimum of 5 credit hours from the following courses:

ACC	122	Principles of Financial Accounting II	3
ACC	132	NC Business Taxes	2
ACC	152	Advanced Software Applications	2
ACC	180	Practices in Bookkeeping	3
ACC	215	Ethics in Accounting	3
ACC	240	Govt. and Not-for-Profit Accounting	3
ACC	268	Information Sys & Internal Control	3
COE	111	Co-Op Work Experience	1
COE	112	Co-Op Work Experience	2

Graduation Requirements ..... 38 Credit Hours

ACCOUNTING CORE - C25100C

This certificate is designed to prepare students in the core of accounting and business concepts and includes all university transferrable courses. Credits earned in this program may be transferred toward and Associate in Applied Science Degree in Accounting (provided the student meets the entrance requirements

for the Accounting program) as well as either the Associate in Arts or Associate in Science for College Transfer.
-Day, Evening, and Online

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
BUS	115	Business Law I	3
ECO	251	Principles of Microeconomics	3
OR			
ECO	252	Principles of Macroeconomics	3
ENG	111	Expository Writing	3
Graduation Requirements			**18 Credit Hours**

INCOME TAX PREPARER - C25100B

-Day, Evening, Online

This certificate program is designed to prepare students for job opportunities in the accounting field in the specific area of income tax preparation. Credit earned in this program may be transferred toward an Associate in Applied Science Degree in Accounting, provided the student meets the entrance requirements for the Accounting program.

ACC	120	Principles of Financial Accounting	4
ACC	129	Individual Income Taxes	3
ACC	130	Business Income Taxes	3
BUS	115	Business Law I	3
CIS	111	Basic PC Literacy	2
Graduation Requirements			**15 Credit Hours**

PAYROLL ACCOUNTING CLERK - C25100A

-Day, Evening and Online

This certificate program is designed to prepare students for job opportunities in the accounting field in the specific area of payroll accounting. Credits earned in this program may be transferred toward an Associate in Applied Science Degree in Accounting, provided the student meets the entrance requirements for the Accounting program.

ACC	120	Principles of Financial Accounting	4
ACC	140	Payroll Accounting	2
ACC	149	Introduction to Accounting Spreadsheets	2
ACC	150	Accounting Software Applications	2
CIS	111	Basic PC Literacy	2
Graduation Requirements			**12 Credit Hours**

Baking & Pastry Arts

The Baking and Pastry Arts curriculum is designed to prepare students with the skills and knowledge required for employment in the baking/pastry industry including restaurants, hotels, independent bakeries/pastry shops, wholesale/retail markets, and high-volume bakeries.

Course offerings emphasizing practical application, a strong theoretical knowledge base, and professionalism provide the critical competencies to meet industry demands. Course work includes specialty/artisan breads, desserts, pastries, candies, decorative work, high-volume production and food marketing.

Graduates should qualify for entry-level positions, such as pastry/bakery assistant, area pastry chef and assistant pastry chef. American Culinary Federation certification is available to graduates.

BAKING AND PASTRY ARTS - A55130

-Day Only

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
MAT	115	Mathematical Models	3
		Humanities/Fine Arts Elective	3
		Social/Behavioral Science Elective	3

Major Courses

BPA	120	Petit Fours & Pastries	3
BPA	130	European Cakes & Tortes	3
BPA	150	Artisan & Specialty Breads	4
BPA	210	Cake Design & Decorating	3
BPA	220	Confection Artistry	4
BPA	230	Chocolate Artistry	3
BPA	230A	Chocolate Artistry Lab	1
BPA	240	Plated Desserts	3
BPA	250	Dessert & Bread Production	5
BPA	260	Pastry & Baking Marketing	3
COE	112	Co-op Work Experience I	2
CUL	110	Sanitation and Safety	2
CUL	112	Nutrition for Foodservice	3
CUL	140	Basic Culinary Skills	5
CUL	160	Baking I	3
CUL	170	Garde-Manger I	3
HRM	245	Human Resources Management Hosp	3
HRM	260	Procurement of Hospitality	3
Graduation Requirements			**71 Credit Hours**

BAKING AND PASTRY ARTS—D55130

-Day Only

General Education Courses

ENG	111	Expository Writing	3
MAT	115	Mathematical Models	3

Major Courses

BPA	120	Petit Fours & Pastries	3
BPA	130	European Cakes & Tortes	3
BPA	150	Artisan & Specialty Breads	4
BPA	210	Cake Design & Decorating	3
BPA	220	Confection Artistry	4
BPA	230	Chocolate Artistry	3
BPA	230A	Chocolate Artistry Lab	1
BPA	240	Plated Desserts	3
BPA	250	Dessert & Bread Production	5
CUL	110	Sanitation and Safety	2
CUL	112	Nutrition for Foodservice	3
CUL	140	Basic Culinary Skills	5
CUL	160	Baking I	3
HRM	245	Human Resources Management Hosp	3
HRM	260	Procurement of Hospitality	3
Graduation Requirements			**40 Credit Hours**

BAKING AND PASTRY ARTS - C55130A

The Baking certificate includes basic courses to help prepare students for entry into the baking field or to advance in their current food service jobs. Course addresses both the art and the science of baking. Students learn basic sanitation, cooking and baking principles, as well as pastry, confection and production baking skills. The majority of class is devoted to actual hands-on baking skill development.

BPA	150	Artisan & Specialty Breads	4
BPA	210	Cakes Design & Decorating	3
CUL	110	Sanitation and Safety	2
CUL	140	Basic Culinary Skills	5

CUL 160 Baking I 3
Completion Requirements ..... 17 Credit Hours

Business Administration

The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students will be provided with a fundamental knowledge of business functions, processes, and an understanding of business organizations in today's global economy.

Course work includes business concepts such as accounting, business law, economics, management, and marketing. Skills related to the application of these concepts are developed through the study of computer applications, communication, team building, and decision making.

Through these skills, students will have a sound business education base for lifelong learning. Graduates are prepared for employment opportunities in marketing, management operations, and some graduates have started up their own small businesses.

BUSINESS ADMINISTRATION - A25120

-Day and Evening

General Education Courses

ENG 111 Expository Writing 3
ENG 112 Argument-Based Research 3
OR
ENG 114 Professional Research and Reporting 3
Mathematic/Science Elective 3
Social/Behavioral Science Elective 3
Humanities/Fine Arts Elective 3

Major Courses

ACC 120 Principles of Financial Accounting 4
ACC 121 Principles of Managerial Accounting 4
OR
BUS 110 Introduction to Business 3
BUS 115 Business Law I 3
BUS 116 Business Law II 3
BUS 121 Business Math 3
BUS 137 Principles of Management 3
BUS 139 Entrepreneurship I 3
BUS 153 Human Resources Management 3
BUS 217 Employment Law & Regulations 3
BUS 225 Business Finance 3
CIS 110 Introduction to Computers 3
MKT 120 Principles of Marketing 3
MKT 221 Consumer Behavior 3
Economics Elective 3
Major Elective 6

Major Electives

Select three courses from the following

ACC 129 Individual Income Taxes 3
ACC 140 Payroll Accounting 2
ACC 215 Ethics in Accounting 3
ACC 268 Info Sys & Intrl Ctrls 3
BAF 143 Financial Planning 3
BUS 125 Personal Finance 3
BUS 148 Survey of Real Estate 3
BUS 151 People Skills 3
BUS 228 Business Statistics 3
BUS 230 Small Business Management 3
BUS 234 Training and Development 3
BUS 239 Business Applications Seminar 3
BUS 245 Entrepreneurship II 3
BUS 260 Business Communications 3
BUS 280 REAL Small Business 4
COE 111 Co-op Work Experience I 1
ECM 210 Introduction to E-Commerce 3
INT 110 International Business 3
LOG 110 Introduction to Logisitics 3
MKT 123 Fundamentals of Selling 3
MKT 223 Customer Service 3
MKT 224 International Marketing 3
OST 136 Word Processing 3
OST 137 Office Software Applications 3
OST 140 Internet Communication/Research 3
OST 184 Records Management 3
WEB 110 Internet/Web Fundamentals 3
WEB 140 Web Development Tools 3
Graduation Requirements ..... 64 Credit Hours

BUSINESS ADMINISTRATION: BUSINESS CORE - C25120D

-Day, Evening, and Online

Major Courses

ACC 120 Principles of Financial Accounting 4
BUS 110 Introduction to Business 3
BUS 115 Business Law I 3
BUS 137 Principles of Management 3
ECO 251 Principles of Microeconomics 3
OR
ECO 252 Principles of Macroeconomics 3
Completion Requirements ..... 16 Credit Hours

CAREER SUCCESS - C25120G

-Day, Evening, and Online

Major Courses

ACA 220 Professional Transition 1
BUS 110 Introduction to Business 3
BUS 125 Personal Finance 3
BUS 151 People Skills 3
BUS 260 Business Communications 3
Completion Requirements ..... 13 Credit Hours

CUSTOMER SERVICE - C25120B

Day and Evening

Customer Service is a certificate under the Business Administration curriculum. This certificate provides a broad foundation of communication and interpersonal skills designed to prepare the individual for customer contact roles within a business organization.

Employment opportunities include customer service representative, customer services manager, consumer relations credit analyst, credit card specialist, credit and collection specialist, retail sales, accounts control analyst, administrative assistant, authorizations analyst, and telephone sales representatives in both production and service-oriented businesses.

Major Courses

BUS 110 Introduction to Business 3
BUS 121 Business Math 3
BUS 151 People Skills 3
CIS 110 Introduction to Computers 3
MKT 223 Customer Service 3
Completion Requirements ..... 15 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

BUSINESS TECHNOLOGIES

E-COMMERCE - C2120E

-Online

Major Courses

ECM	210	Introduction to Electronic Commerce	3
MKT	120	Principles of Marketing	3
WEB	110	Introduction to the Internet	3
WEB	140	Web Development Tools	3

Completion Requirements .....12 Credit Hours

ENTREPRENEURSHIP - C25120C

-Day & Evening

This certificate enables students to recognize business opportunities and develop a business plan for the purpose of securing financing for a business start-up as well as to understand how to effectively operate a small business. Students will learn practical skills and some of the best business practices in establishing and operating a business.

Major Courses

BUS	110	Introduction to Business	3
BUS	139	Entrepreneurship I	3
BUS	245	Entrepreneurship II	3
OR			
BUS	280	REAL Small Business	3
MKT	120	Principles of Marketing	3

Completion Requirements ..... 12 Credit Hours

LEADERSHIP - C25120F

-Day, Evening, and Online

Major Courses

BUS	137	Principles of Management	3
BUS	151	People Skills	3
OR			
MKT	223	Customer Service Skills	3
BUS	153	Human Resources Management	3
BUS	234	Training and Development	3
OR			
HUM	115	Critical Thinking	3

Completion Requirements .....12 Credit Hours

SALES DEVELOPMENT - C25120A

- Day and Evening

This certificate prepares students to enter the sales profession. Study includes accepted principles and techniques of selling, interpersonal skills involving communication fundamentals, and motivation theory. Students learn prospecting and preapproach activities, specific strategies for handling objections, ways to gain an interview, demonstration tools, and closing methods. Study includes both retail selling and industrial selling. The program also includes legal and ethical considerations.

Major Courses

BUS	121	Business Mathematics	3
ENG	111	Expository Writing	3
MKT	120	Principles of Marketing	3
MKT	123	Fundamentals of Selling	3
MKT	221	Consumer Behavior	3
PSY	118	Interpersonal Psychology	3

Completion Requirements .....18 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

Business Administration/ Human Resources Management

Human Resource Management (HRM) is the organizational function responsible for creating and supporting the systems that are used to effectively manage an organization's employees. HRM managers, professionals and support staff work in areas such as compensation, benefits, staffing and training.

The Business Administration / Human Resources curriculum prepares students to perform these roles in organizations of varying size and type and, depending on individual and organizational factors, roles can be performed at the administrative support, individual contributor / professional or managerial level.

Critical thinking, project and problem solving skills are emphasized in the program course work. Because the degree requires the general study of business and management as well as HRM, students are prepared to begin careers in both disciplines. The degree is fully online and can be completed in four full-time semesters.

BUSINESS ADMINISTRATION/ HUMAN RESOURCES MANAGEMENT - A2512C

-Online & Evening

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
		Mathematic/Science Elective	3
		Social/Behavioral Science Elective	3
		Humanities/Fine Arts Elective	3

Major Courses

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
OR			
BUS	225	Business Finance	3
BUS	110	Introduction to Business	3
BUS	115	Business Law I	3
BUS	121	Business Math	3
BUS	137	Principles of Management	3
BUS	217	Employment Law and Regulations	3
BUS	234	Training and Development	3
BUS	256	Recruitment, Selection, and Personnel Planning	3
BUS	258	Compensation and Benefits	3
BUS	259	HRM Applications	3
CIS	110	Introduction to Computers	3
MKT	120	Principles of Marketing	3
		Economics Elective	3
		Major Elective	6

Major Elective

Select one course from the following

ACC	140	Payroll Accounting	2
BAF	143	Financial Planning	3
BUS	116	Business Law II	3
BUS	139	Entrepreneurship I	3
BUS	125	Personal Finance	3
BUS	148	Survey of Real Estate	3
BUS	151	People Skills	3
BUS	153	Human Resources Management	3
BUS	245	Entrepreneurship II	3
BUS	280	REAL Small Business	3
ECM	210	Introduction to E-Commerce	3
INT	110	International Business	3
MKT	123	Fundamentals of Selling	3

MKT	221	Consumer Behavior	3
MKT	223	Customer Service	3
MKT	224	International Marketing	3
OST	136	Word Processing	3
OST	137	Office Software Applications	3
OST	140	Internet Communications/Research	3
OST	184	Records Management	3

Graduation Requirements ..... 64 Credit Hours

BUSINESS ADMINISTRATION/HUMAN RESOURCES ADMINISTRATION CERTIFICATE - C2512CB

-Online

The Business Administration Human Resources Administration Certificate is designed for students who wish to enter the field of Human Resources in an administrative capacity. The program is designed to work with the Office Systems Technology program to help students develop the computing, interpersonal and Human Resources specific qualifications to work in the field.

Major Courses

BUS	151	People Skills	3
OR			
MKT	223	Customer Service	3
BUS	153	Human Resources Management	3
BUS	234	Training and Development	3
OR			
BUS	256	Recruitment, Selection, and Planning	3
OR			
BUS	258	Compensation and Benefits	3
OST	136	Word Processing	3
OR			
OST	137	Office Software Applications	3
OST	140	Internet Comm/Research	2
OST	184	Records Management	3

Completion Requirements .....17 Credit Hours

BUSINESS ADMINISTRATION/ HUMAN RESOURCES MANAGEMENT - C2512CA

-Online

The Business Administration Human Resource Management Certificate is designed for students who already have degrees in another field and wish to learn the skills necessary to work in HRM as well as for those already employed in Human Resources who wish to add to their professional capabilities, learn new HRM skills and / or prepare for the HRCI certification examination. The certificate program is fully online and can be completed in two semesters.

Major Courses

BUS	153	Human Resource Management	3
BUS	217	Employment Law and Regulations	3
BUS	234	Training and Development	3
BUS	256	Recruitment, Selection, and Personnel Planning	3
BUS	258	Compensation and Benefits	3

Completion Requirements .....15 Credit Hours

Criminal Justice Technology

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.

CRIMINAL JUSTICE TECHNOLOGY - A55180

-Day, Evening, and Online

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Professional Research & Reporting	3
MAT	110	Mathematical Measurement	3
		Humanities/Fine Arts Elective	3
		Social/Behavioral Science Elective	3

Major Courses

ACA	122	College Transfer	1
CJC	111	Introduction to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	131	Criminal Law	3
CJC	132	Court Procedure and Evidence	3
CJC	212	Ethics and Community Relations	3
CJC	213	Substance Abuse	3
CJC	215	Organization and Administration	3
CJC	221	Investigative Principles	4
CJC	222	Criminalistics	3
CJC	231	Constitutional Law	3
CJC	232	Civil Liability	3
		Major Elective	9

Major Electives

Select 9 hours from the following courses

CJC	122	Community Policing	3
CJC	141	Corrections	3
CJC	160	Terrorism: Underlying Issues	3
CJC	214	Victimology	3
CJC	223	Organized Crime	3
CJC	225	Crisis Intervention	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3

Graduation Requirements ..... 65 Credit Hours

PRINCIPLES OF CORRECTIONS - C55180A

The Principles of Corrections certificate is designed to provide entry level competencies in the field of contemporary corrections as they apply to criminal justice systems and operations. Study will focus on the history, structure, functions, and philosophy of the criminal justice system with regard to corrections; juvenile justice systems and related issues; corrections alternatives, treatment programs, inmate control; statutory/case law as it applies to correctional concepts, facilities, and related practices; and the study of offenders, diversion, house arrest, restitution, community service, probation and parole. Upon completion of this certificate, employment

opportunities exist in a variety of local, state, and federal corrections facilities.
-Day & Online

Major Courses

CJC	111	Intro to Criminal Justice	3
CJC	113	Juvenile Justice	3
CJC	141	Corrections	3
CJC	233	Correctional Law	3
CJC	241	Community-Based Corrections	3

Graduation Requirements……..…..15 Credit Hours

PRINCIPLES OF IDENTIFICATION & INFORMATION - C5518A

Crime scene investigation is a complex process that includes the initial response; evaluation, processing, and documentation of the scene. Throughout the investigation process it is vital to maintain the integrity of the investigation. This is done through, crime scene processing, investigative skills, interview and interrogation of the suspects, proper documentation, which includes written documentation, diagrams and sketches, crime scene photography and basic friction ridge analysis. Crime Scene investigators can pursue a number of professional accreditations in order to meet basic and advanced standards. The competent CSI will seek continuing education opportunities through attendance at conferences and training seminars, as well as advanced educational programs such as this certificate with Wake Technical Community College.
-Day & Online

Major Courses

CJC	120	Interview/Interrogations	2
CJC	144	Crime Scene Processing	3
CJC	221	Investigative Principles	4
CJC	222	Criminalistics	3
CJC	245	Basic Friction Ridge Analysis	3
CJC	246	Advanced Friction Ridge Analysis	3

Graduation Requirements 18

Criminal Justice Technology/ Latent Evidence

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.

LATENT EVIDENCE - A5518A

-Day Only

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research & Reporting	3
HUM	110	Technology and Society	3
MAT	110	Mathematical Measurement	3
PSY	150	General Psychology	3

Major Courses

BIO	110	Principles of Biology	4
CJC	111	Introduction to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	120	Interviews/Interrogations	2
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 and Community Relations	3
CJC	213	Substance Abuse	3
CJC	221	Investigative Principles	4
CJC	222	Criminalistics	3
CJC	231	Constitutional Law	3
CJC	245	Basic Friction Ridge Analysis	3
CJC	246	Advanced Friction Ridge Analysis	3

Graduation Requirements ..... 64 Credit Hours

Culinary Arts

The Culinary Arts curriculum provides specific training required to prepare students to assume positions as trained culinary professionals in a variety of food service settings including full service restaurants, hotels, resorts, clubs, catering operations, contract food service, and health care facilities.

Course offerings emphasize practical application, a strong theoretical knowledge base, and professionalism and provide the critical competencies to successfully meet industry demands. Courses also include sanitation, food/beverage service and control, baking, garde manger, American/International cuisines, and hospitality supervision.

Graduates should qualify for entry-level positions such as line cook, station chef, and assistant pastry chef. American Culinary Federation certification is available to graduates. With experience, graduates may advance to positions such as sous-chef, executive chef, or food service manager.

Please Note: *CUL 140, Basic Culinary Skills is a pre-requisite for CUL 160, Baking I*.

CULINARY ARTS - A55150

-Day Only

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
MAT	115	Mathematical Models	3
		Humanities/Fine Arts Elective	3
		Social/Behavioral Science Elective	3

Major Courses

COE	112	Co-op Work Experience I	2
CUL	110	Sanitation and Safety	2
CUL	112	Nutrition for Food Service	3
CUL	130	Menu Design	2
OR			
CUL	214	Wine Appreciation	2
CUL	135	Food and Beverage Service	2
CUL	135A	Food and Beverage Service Lab	1
CUL	140	Basic Culinary Skills	5
CUL	160	Baking I	3
CUL	170	Garde-Manger I	3
CUL	230	Global Cuisines	5

CUL	240	Advanced Culinary Skills	5
CUL	250	Classical Cuisine	5
HRM	220	Food and Beverage Control	3
HRM	245	Human Resources Management Hosp	3
HRM	260	Procurement for Hospitality	3
SPA	120	Spanish for the Workplace	3

Major Electives

Select one of the following courses

CUL	214	Wine Appreciation	2
CUL	280	Pastry and Confections	3
CUL	285	Competition Fundamentals	3

Select a minimum of 7 credit hours from the following:

BPA	150	Artisan Breads	4
OR			
BPA	210	Cake Design & Decorating	3
OR			
CUL	260	Baking II	3
OR			
CUL	270	Garde-Manger II	3
OR			
COE	122	Co-op Work Experience II	2

Graduation Requirements ..... 72 Credit Hours

CULINARY ARTS - D55150

-Day Only

General Education Courses

ENG	111	Expository Writing	3
MAT	115	Mathematical Models	3

Major Courses

CUL	110	Sanitation and Safety	2
CUL	140	Basic Culinary Skills	5
CUL	160	Baking I	3
CUL	170	Garde-Manger I	3
CUL	240	Advanced Culinary Skills	5
HRM	245	Human Resources Management Hosp	3

Select a minimum of 6 credit hours from the following:

CUL	112	Nutrition for Foodservice	3
HRM	220	Food & Beverage Cost Control	3
HRM	260	Procurement for Hospitality	3

Select a minimum of 10 credit hours from the following:

BPA	150	Artisan Breads	4
BPA	210	Cake Design & Decorating	3
CUL	130	Menu Design	2
CUL	260	Baking II	3
CUL	270	Garde Manger II	3

Graduation Requirements 43

CULINARY ARTS - C55200A

-Day and Evening

The Culinary Certificate includes basic courses to help prepare students for entry into the culinary field or to advance in their current foodservice jobs.

Courses address both the art and the science of food preparation. Students learn basic sanitation, cooking and baking principles, and garnishing and presentation skills. Modern supervision techniques are also studied and practiced. The majority of class time is devoted to actual hands-on kitchen skill development.

Courses credits are transferable to the Culinary Technology associate degree program.

Major Courses

CUL	110	Sanitation and Safety	2
CUL	140	Basic Culinary Skills	5
CUL	160	Baking I	3
or			
CUL	170	Garde-Manger I	3
CUL	240	Advanced Culinary Skills	5
HRM	145	Hospitality Supervision	3

Completion Requirements ..... 18 Credit Hours

CULINARY ARTS: BAKING - C55150B

-Day

The Baking certificate includes basic courses to help prepare students for entry into the baking field or to advance in their current food service jobs. Courses address both the art and the science of baking. Students learn basic sanitation, cooking and baking principles, as well as pastry, confection and production baking skills. The majority of class is devoted to actual hands-on baking skill development.

Major Courses

BPA	250	Dessert and Bread Production	5
CUL	110	Sanitation and Safety	2
CUL	160	Baking I	3
CUL	260	Baking II	3
CUL	280	Pastries and Confections	3

Completion Requirements ..... 16 Credit Hours

Early Childhood Education

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 programs, preschools, public and private schools, recreational centers, Head Start Programs, and school-age programs.

EARLY CHILDHOOD EDUCATION - A55220

-Day and Evening

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
MAT	140/A	Survey of Mathematics	4
OR			
MAT	161/A	College Algebra	4
OR			
BIO	110	Principles of Biology	4
OR			
GEL	120	Physical Geology	4
PSY	150	General Psychology	3
OR			
SOC	210	Introduction to Sociology	3
		Humanities/Fine Arts Elective	3

Major Courses

CIS	111	Basic PC Literacy	2
EDU	119	Introduction to Early Childhood Education	4
EDU	131	Child, Family, and Community	3
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	146	Child Guidance	3
EDU	151	Creative Activities	3
EDU	153	Health, Safety, and Nutrition	3
EDU	157	Active Play	3
EDU	221	Children with Exceptionalities	3
EDU	234	Infants, Toddlers, & Twos	3
OR			
EDU	235	School-Age Dev & Program	3
EDU	251	Exploration Activities	3
EDU	261	Early Childhood Administration I	3
EDU	262	Early Childhood Administration II	3
OR			
EDU	287	Leadership/Early Child Education	3
EDU	271	Educational Technology	3
EDU	280	Language and Literacy Experiences	3
EDU	282	Early Childhood Literature	3
EDU	284	Early Childhood Capstone Prac	4

Major Electives

Select 2 credit hours from the following course list:

EDU	114	Intro to Family Childcare	3
EDU	188	Issues in Early Childhood Education	2
EDU	163	Classroom Mgt & Instruct	3
EDU	263	School-Age Program Admin	2

Graduation Requirements ..... 72 Credit Hours

EARLY CHILDHOOD EDUCATION - D55220A

-Day and Evening

The Early Childhood Education diploma prepares individuals to work as assistants with early childhood specialists in children centers, nursery schools, kindergartens, child development centers, hospitals, institutions, camps, and recreation centers. This curriculum provides course work to meet the requirements for middle-level employment and upgrading or the retraining of staff in child development facilities. Instruction includes theory and application in early childhood, growth, and development of children, behavior patterns of children, health practices, and how to deal with the emotional and physical problems of children.

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
PSY	150	General Psychology	3
OR			
SOC	210	Introduction to Sociology	3

Major Courses

CIS	111	Basic PC Literacy	2
EDU	119	Introduction to Early Childhood Education	4
EDU	131	Child, Family, and Community	3
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	146	Child Guidance	3
EDU	151	Creative Activities	3
EDU	153	Health, Safety, and Nutrition	3
EDU	157	Active Play	3
EDU	184	Early Child Intro Pract	2
EDU	221	Children with Exceptionalities	3
EDU	234	Infants, Toddlers, & Twos	3
OR			
EDU	235	School-Age Dev & Program	3

Graduation Requirements ..... 44 Credit Hours

ECE ADMINISITRATORS - C55220A

-Day and Evening

Major Courses

EDU	119	Introduction to Early Childhood Education	4
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	188	Issues in Early Childhood	2
EDU	261	Early Childhood Admin I	3
EDU	262	Early Childhood Admin II	3

Completion Requirements ..... 18 Credit Hours

ECE AND CDA - C55220D

-Day and Evening

Major Courses

EDU	119	Intro to Early Childhood Education	4
EDU	131	Child, Family, and Community	3
EDU	145	Child Development II	3
EDU	146	Child Guidance	3
EDU	153	Health, Safety, and Nutrition	3
EDU	184	Early Child Intro Practicum	2

Graduation Requirements ..... 18 Credit Hours

SCHOOL AGE - C55220E

-Day and Evening

Major Courses

EDU	119	Intro to Early Childhood Education	4
EDU	131	Child, Family, and Community	3
EDU	145	Child Development II	3
EDU	163	Classroom Mgmt and Instruction	3
EDU	235	School-Age Dev and Program	3
EDU	263	School-Age Program Admin	2

Graduation Requirements ..... 18 Credit Hours

FAMILY CHILD CARE - C55220F

-Day and Evening

Major Courses

EDU	114	Intro to Family Childhood Care	3
EDU	119	Intro to Early Childhood Education	4
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	261	Early Childhood Admin I	3
EDU	263	School-Age Program Admin	2

Graduation Requirements ..... 18 Credit Hours

INFANT/TODDLER CARE AND CDA - C55290

-Day and Evening

The Infant/Toddler Care certificate provides a strong foundation for early childhood professionals working with very young children. The North Carolina Division of Child Development includes this certificate as one option in obtaining quality points in the revised Star Rated License system.

Major Courses

EDU	119	Introduction to Early Childhood Education	4
EDU	131	Child, Family, and Community	3
EDU	144	Child Development I	3
EDU	153	Health, Safety, and Nutrition	3
EDU	184	Early Childhood Intro Practicum	2
EDU	234	Infant, Toddlers, and Twos	3

Completion Requirements ..... 18 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

Fire Protection Technology

The Fire Protection Technology curriculum is designed to provide individuals with technical and professional knowledge to make decisions regarding fire protection for both public and private sectors. It also provides a sound foundation for continuous higher learning in fire protection, administration, and management.

Course work includes classroom and laboratory exercises to introduce the student to various aspects of fire protection. Students 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.

FIRE PROTECTION TECHNOLOGY - A55240

-Day

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
HUM	230	Leadership Development	3
MAT	140/A	Survey of Mathematics	4
PSY	150	General Psychology	3

Major Courses

FIP	120	Intro to Fire Protection	3
FIP	124	Fire Prevention & Public	3
FIP	128	Detection & Investigation	3
FIP	132	Building Construction	3
FIP	152	Fire Protection Law	3
FIP	220	Fire Fighting Strategies	3
FIP	221	Adv Fire Fighting Strategies	3
FIP	229	Fire Dynamics and Combust	3
FIP	230	Chem of Hazardous Mat I	5
FIP	232	Hydraulics & Water Dist	3
FIP	240	Fire Service Supervision	3
FIP	244	Fire Protection Project	3
FIP	248	Fire Svc Personnel Adm	3
FIP	276	Managing Fire Services	3

Major Electives

Select 10 credit hours from the following list of courses:

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	113	Co-op Work Experience II	1
FIP	136	Inspection and Codes	3
FIP	144	Sprinklers & Auto Alarms	3
FIP	156	Computers in Fire Svc	2
FIP	164	OSHA Standards	3
FIP	228	Local Govt Finance	3
FIP	236	Emergency Management	3
FIP	256	Munic Public Relations	3
FIP	260	Fire Protect Planning	3
FIP	277	Fire and Social Behavior	3

Graduation Requirements ..... 70 Credit Hours

FIRE PROTECTION TECHNOLOGY: BASIC - C55240A

-Day & Online

The General Certificate in Fire Protection is designed to develop a student's appreciation and understanding of fire service as a career. Concentrated studies in firefighting strategies, building construction, and fire prevention prepares a student for an entry-level position in fire service.

Major Courses

FIP	120	Introduction to Fire Protection	3
FIP	124	Fire Prevention and Public Education	3
FIP	132	Building Construction	3
FIP	220	Firefighting Strategies	3
FIP	221	Advanced Firefighting Strategies	3

Graduation Requirements……..…..15 Credit Hours

FIRE MANAGEMENT - C55240C

-Day

The Fire Service Management Certificate develops team leadership skills in preparation for the effective mitigation of incidents that pose serious loss or hazard to citizens and property. The program provides an overview of the theories, practices, and scope of fire service management in action, including personnel supervision, report writing, administration, public relations, finance, and planning. Upon completion, certificate holders may qualify for supervisory or entry-level management positions in fire suppression, fire prevention, or training.

Major Courses

ENG	111	Expository Writing	3
FIP	152	Fire Protection Law	3
FIP	240	Fire Service Supervision	3
FIP	248	Fire Service Personnel Administration	3
FIP	276	Managing Fire Services	3

PLUS + (1) of the following electives as offered:

FIP	228	Local Government Finance	3
FIP	256	Municipal Public Relations	3
FIP	260	Fire Protection Planning	3
FIP	277	Fire and Social Behavior	3

Graduation Requirements ..... 18 Credit Hours

LOSS CONTROL/INVESTIGATION - C55240B

-Day

The Loss Control/Investigation certificate prepares students to function effectively and lead within a fire department's inspections and investigations division. The program provides an overview into the theories, practices, and scope of the fire prevention function, including the study of fire cause investigation, fire protection law, model fire codes, life safety, public education, fire protection systems, employee supervision and expository writing. Upon completion, certificate holders may qualify for supervisory or entry-level management positions in fire prevention, training, or fire suppression. Additional employment opportunities in fire and life safety protection may also be found in hospitals, colleges, manufacturing facilities or insurance companies.

Major Courses

ENG	111	Expository Writing	3
FIP	124	Fire Prevention and Public Education	3
FIP	128	Detection and Investigation	3
FIP	152	Fire Protection Law	3
FIP	248	Fire Service Personnel Administration	3

PLUS + (1) of the following electives as offered:

FIP	136	Inspections and Codes	3
FIP	256	Municipal Public Relations	3
FIP	260	Fire Protection Planning	3
FIP	277	Fire and Social Behavior	3

Graduation Requirements ..... 18 Credit Hours

Global Logistics Technology

The Global Logistics Technology curriculum prepares individuals for a multitude of career opportunities in distribution, transportation, and manufacturing organizations. Classroom instruction, field of study experiences, and practical laboratory applications of logistics management and global technology capabilities are included in the program of study.

Course work includes computer applications, accounting, business law, economics, management, industrial sciences, and international studies. Students will solve different levels of logistics-related problems through case study evaluations and supply chain projects utilizing logistical hardware and intelligent software tools.

Graduates should qualify for positions in a wide range of government agencies, manufacturing, and service organizations. Employment opportunities include entry-level purchasing, material management, warehousing, inventory, transportation coordinators, and logistics analysts. Upon completion, graduates may be eligible for certification credentials through APICS and AST&L.

GLOBAL LOGISTICS TECHNOLOGY - A25170-Online

General Education Courses

ECO	251	Principles of Microeconomics	3
OR			
ECO	252	Principles of Macroeconomics	3
ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
OR			
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra/Trigonometry I	6
OR			
MAT	161/A	College Algebra	4
		Humanities/Fine Arts Elective	3

Major Courses

ACC	120	Principles of Financial Accounting	4
BUS	115	Business Law I	3
BUS	137	Principles of Management	3
CIS	110	Introduction to Computers	3
DBA	110	Database Concepts	3
INT	110	International Business	3
LOG	110	Introduction to Logistics	3
LOG	125	Transportation Logistics	3
LOG	211	Distribution Management	3
LOG	215	Supply Chain Management	3
LOG	225	Logistics Systems	4
LOG	235	Import/Export Management	3
LOG	240	Purchasing Logistics	3
LOG	245	Logistics Security	3
LOG	250	Advanced Global Logistics	3

Major Electives

Select 6 credit hours from the following list of courses:

ACC	121	Principles of Managerial Accounting	4
BUS	153	Human Resources Management	3
BUS	225	Business Finance	3
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	113	Co-op Work Experience II	1
COE	121	Co-op Work Experience II	1
COE	122	Co-op Work Experience II	2
COE	123	Co-op Work Experience II	3
CTS	130	Spreadsheet	3
MKT	120	Principles of Marketing	3

Graduation Requirements ..... 69 Credit Hours

GLOBAL LOGISTICS TECHNOLOGY: BASIC - C25170A

-Online

Major Courses

LOG	110	Introduction to Logistics	3
LOG	125	Transportation Logistics	3
LOG	215	Supply Chain Management	3
LOG	235	Import/Export Management	3
LOG	245	Logistics Security	3

Graduation Requirements ..... 15 Credit Hours

DISTRIBUTION MANAGEMENT - C25170B

- Online

Major Courses

LOG	110	Introduction to Logistics	3
LOG	125	Transportation Logistics	3
LOG	211	Distribution Management	3
LOG	215	Supply Chain Management	3
LOG	225	Import/Export Management	4

Graduation Requirements ..... 16 Credit Hours

Hospitality Management

The Hospitality Management curriculum prepares students to understand and apply the administrative and practical skills needed for supervisory and managerial positions in hotels, motels, resorts, inns, restaurants, institutions, and clubs.

Course work includes front office management, guest services, sanitation, menu writing, quality management, purchasing, and other areas critical to the success of hospitality professionals.

Upon completion, graduates should qualify for supervisory or entry-level management positions in food and lodging including: front office, reservations, housekeeping, purchasing, dining room, and marketing. Opportunities are also available in the support areas of food and equipment sales.

HOSPITALITY MANAGEMENT - A25110

-Day Only

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
MAT	115	Mathematical Models	3
		Humanities/Fine Arts Elective	6
		Social/Behavioral Science Elective	3

Major Courses

ACC	175	Hotel and Restaurant Accounting	4
BUS	139	Entrepreneurship I	3
OR			
HRM	210	Meetings & Event Planning	3
COE	112	Co-op Work Experience I	2
CUL	110	Sanitation and Safety	2
CUL	130	Menu Design	3
OR			
HRM	225	Beverage Management	3
CUL	135	Food and Beverage Service	2
CUL	135A	Food and Beverage Service Lab	1
CUL	142	Fundamentals of Food	5
CUL	214	Wine Appreciation	2
OR			
HRM	120	Front Office Procedures	3
HRM	110	Introduction to Hospitality	2
HRM	140	Hospitality Tourism Law	3

HRM	145	Hospitality Supervision	3
HRM	215	Restaurant Management	3
HRM	220	Food and Beverage Controls	3
HRM	220A	Food and Beverage Control Lab	1
HRM	240	Hospitality Marketing	3
HRM	245	Human Resources Management Hosp	3
HRM	260	Procurement for Hospitality	3
HRM	275	Leadership-Hospitality	3
HRM	280	Hospitality Management Problems	3
SPA	120	Spanish for the Workplace	3
CUL	130	Menu Design	2
HRM	215	Restaurant Management	3
HRM	225	Beverage Management	2

Graduation Requirements ..... 68 Credit Hours

HOSPITALITY MANAGEMENT - D25110

-Day

General Education Courses

ENG	111	Expository Writing	3
MAT	115	Mathematical Models	3

Major Courses

CUL	110	Sanitation and Safety	2
BUS	139	Entrepreneurship I	3
OR			
CUL	214	Wine Appreciation	2
OR			
HRM	225	Beverage Management	3
HRM	110	Introduction to Hospitality	2
HRM	140	Legal Issues—Hospitality	3
HRM	220	Cost Control—Food & Beverage	3
HRM	240	Marketing for Hospitality	3
HRM	245	Human Resources Management Hosp	3

Select a minimum of 8 credit hours from the following:

ACC	175	Hotel & Restaurant Accounting	4
CUL	130	Menu Design	2
CUL	135	Food & Beverage Service	2
CUL	135A	Food & Beverage Service Lab	1
CUL	142	Fundamentals of Food	2
HRM	260	Procurement for Hospitality	3

Select a minimum of 8 credit hours from the following:

COE	112	Co-Op Work Experience	2
CUL	214	Wine Appreciation	3
HRM	120	Front Office Procedures	3
HRM	210	Meeting & Event Planning	3
SPA	120	Spanish for the Workplace	3

Graduation Requirements ..... 41 Credit Hours

EVENT MANAGEMENT - C25110A

-Day Only

Major Courses

CUL	110	Sanitation and Safety	2
CUL	130	Menu Design	2
CUL	135	Food & Beverage Service	2
CUL	135A	Food & Beverage Service Lab	1
HRM	110	Introduction to Hospitality	2
HRM	140	Legal Issues—Hospitality	3
HRM	210	Meetings and Conventions	3
HRM	220	Cost Control—Food & Beverage	3
HRM	240	Marketing for Hospitality	3
HRM	260	Procurement for Hospitality	3

Completion Requirements ..... 16 Credit Hours

HOTEL MANAGEMENT - C25110B

Major Courses

CUL	110	Sanitation and Safety	2
HRM	110	Introduction to Hospitality & Tourism	3
HRM	120	Front Desk	
HRM	245	Human Resources Management Hosp	3

Select a minimum of 6 credit hours from the following:

ACC	175	Hotel and Restaurant Accounting	4
HRM	140	Legal Issues—Hospitality	3
HRM	210	Meetings & Event Planning	3
HRM	240	Marketing for Hospitality	3
HRM	260	Procurement for Hospitality	3

Graduation Requirements 16

ENTREPRENEUR - C2110C

-Day

Major Courses

BUS	139	Entrepreneurship I	2
CUL	110	Sanitation and Safety	2
HRM	110	Introduction to Hospitality & Tourism	3
HRM	245	Human Resources Management Hosp	3

Select a minimum of 2 credit hours from the following:

ACC	175	Hotel and Restaurant Accounting	4
CUL	135	Food and Beverage Service	2
CUL	135A	Food and Beverage Service Lab	1
HRM	140	Legal Issues—Hospitality	3
HRM	240	Marketing for Hospitality	3
SPA	120	Spanish for the Workplace	3

Completion Requirements ..... 17 Credit Hours

RESTAURANT MANAGEMENT - C25110D

-Day

Major Courses

CUL	110	Sanitation and Safety	2
HRM	110	Introduction to Hospitality	3
CUL	135	Food & Beverage Service	2
CUL	135A	Food & Beverage Service Lab	1
HRM	215	Restaurant Management	3
HRM	245	Human Resources Management Hosp	3

Select a minimum of 2 credit hours from the following:

CUL	130	Menu Design	2
CUL	214	Wine Appreciation	2
HRM	225	Beverage Management	3
HRM	260	Procurement for Hospitality	3

Graduation Requirements ..... 14 Credit Hours

Lateral Entry

The Lateral Entry curriculum provides a course of study leading to the development of the general pedagogy competencies needed to become certified to teach by the North Carolina Department of Public Instruction.

Course work includes human growth and development, learning theory, instructional technology, school policies and procedures, home, school, and community collaborations, and classroom organization and management to enhance learning. Courses offered by partnering senior institutions include instructional methods, literacy, and diversity.
Graduates should meet the general pedagogy competencies within the first three years of teaching, including a minimum of six

semester hours per school year. Additional requirements, such as pre-service training and passing the PRAXIS, are required for licensure.

LATERAL ENTRY - C55430

-Day and Evening

Courses Required at Community College

EDU	131	Child, Family, & Community	3
EDU	163	Classroom Mgt & Instruct	3
EDU	243	Learning Theory	3
EDU	244	Human Growth/Development	3
EDU	245	Policies and Procedures	3
EDU	271	Educational Technology	3

Course Required at Senior Institution

-	-	Literacy/Reading Methods	3(+)
		Instructional Methods	3(+)
		Meeting Special Learning Needs, Exceptionalities, Diversity	3(+)

Total Community College Requirements = 18 Sem. Credit Hrs

Total Completion Requirements 27 (++) Semester Credit Hours.

Office Administration

The Office Administration curriculum prepares individuals for positions in administrative support careers. It equips office professionals to respond to the demands of a dynamic computerized workplace.

Students will complete courses designed to develop proficiency in the use of integrated office 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 positions to supervisor to middle management.

OFFICE ADMINISTRATION - A25370A

-Online

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	115	Mathematical Models	3
PSY	118	Interpersonal Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

BUS	260	Business Communication	3
OST	122	Office Computations	2
OST	132	Keyboard Skill Building	2
OR			
COE	112	Co-Op Work Experience I	2
OST	134	Text Entry and Formatting	3
OST	135	Advanced Text Entry and Formatting	4
OST	136	Word Processing	3
OST	137	Office Software Applications	3
OST	138	Advanced Software Applications	3
OST	140	Internet Comm/Research	2
OST	153	Office Finance Solutions	2
OST	164	Text Editing Applications	3
OST	181	Introduction to Office Systems	3
OST	184	Records Management	3
OST	188	Issues in Office Technology	2
OST	233	Office Publications Design	3
OST	236	Advanced Word/Information Processing	3
OST	284	Emerging Technologies	2
OST	286	Professional Development	3
OST	289	Administrative Office Management	3

Co-op Work Experience

Select two hours from the following courses

COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience II	1

Graduation Requirements ..... 67 Credit Hours

OFFICE ADMINISTRATION DIPLOMA - D25370

-Online

The Office Administration diploma program is designed for the individual entering, upgrading, or retraining in the office occupation field. Coursework includes keyboarding, records management, office procedures, written communications, word processing, and software applications. Through study in these areas, the individual will be able to function effectively in a variety of office occupations. Employment opportunities are available in business, government, and industry.

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3

Major Courses

OST	122	Office Computations	2
OST	134	Text Entry and Formatting	3
OST	135	Adv Text Entry and Formatting	4
OST	136	Word Processing	3
OST	137	Office Software Applications	3
OST	140	Internet Comm/Research	2
OST	164	Text Editing Applications	3
OST	181	Introduction to Office Systems	3
OST	184	Records Management	3
OST	188	Issues in Office Technology	2
OST	286	Professional Development	3

Graduation Requirements ..... 37 Credit Hours

OFFICE SPECIALIST - C25370A

- Online

The Office Specialist certificate program provides the technical and administrative support skills necessary for entry-level employment in a variety of offices. This program includes document processing, records management, Internet research, editing, proofreading, office computations, and office culture issues. Employment opportunities exist in all areas of business and industry.

Major Courses

OST	122	Office Computations	2
OST	134	Text Entry and Formatting	3
OST	140	Internet Comm/Research	2
OST	184	Records Management	3
OST	136	Word Processing	3
OST	164	Text Editing Applications	3
OST	188	Issues in Office Technology	2

Completion Requirements..... 18 Credit Hours

WORD PROCESSING & PUBLICATIONS CERTIFICATE - C25370B

-Online

The Word Processing/Publications certificate program provides the skills necessary to design and produce quality professional documents that combine text, graphics, illustrations, and photographs. This concentrated program includes design

templates, graphic manipulation tools, color schemes, advanced layout techniques, advanced word processing, editing, and proofreading. Employment opportunities include offices that produce newsletters, flyers, logos, signs, and forms.

Major Courses

OST	134	Text Entry and Formatting	3
OST	136	Word Processing	3
OST	140	Internet Comm/Research	2
OST	164	Text Editing Applications	3
OST	233	Office Publications Design	3
OST	236	Advanced Word/Information Processing	3

Completion Requirements .....17 Credit Hours

Office Administration/Legal

LEGAL OFFICE CERTIFICATE - C2537AA

-Online

The Legal Office certificate program is designed to provide the skills necessary for employment in a legal setting. This concentrated program includes legal terminology, legal office procedures, legal transcription, records management, and word processing. Employment opportunities include positions in law practices, corporate law offices, judicial system offices, and government offices.

Major Courses

OST	134	Text Entry and Formatting	3
OST	136	Word Processing	3
OST	155	Legal Terminology	3
OST	156	Legal Office Procedures	3
OST	184	Records Management	3
OST	252	Legal Transcription I	3

Completion Requirements ..... 18 Credit Hours

Medical Office Administration

This curriculum prepares individuals for entry-level medical administrative support positions including office or hospital secretary, medical records clerk, health claims specialist, insurance claims processor, patient account/referral/services representative, and medical transcriptionist.

Coursework includes processing and maintaining medical records, utilizing office equipment/software, medical law and ethics, billing and coding, and transcribing medical documents.

Employment opportunities include the offices of health providers and allied health facilities, insurance claims processors, clinical laboratories, and medical and hospital equipment manufacturers and suppliers.

MEDICAL OFFICE ADMINISTRATION - A25310

-Online

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	115	Mathematical Models	3
PSY	118	Interpersonal Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

BUS	260	Business Communication	3
OST	122	Office Computations	2
OST	131	Keyboarding	2
OST	134	Text Entry and Formatting	3
OST	136	Word Processing	3
OST	137	Office Software Applications	3
OST	140	Internet Comm/Research	2
OST	141	Medical Terms I - Medical Office	3
OST	142	Medical Terms II - Medical Office	3
OST	148	Medical Coding, Billing, and Insurance	3
OST	149	Medical Legal Issues	3
OST	164	Text Editing Applications	3
OST	181	Introduction to Office Systems	3
OST	184	Records Management	3
OST	188	Issues in Office Technology	2
OST	236	Advanced Word/Information Processing	3
OST	241	Medical Office Transcription I	2
OST	243	Medical Office Simulation	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2
OST	281	Emerg Issues in Medical Office	3
OST	286	Professional Development	3
COE	112	Co-Op Work Experience I OR	2
OST	244	Medical Document Production	2

Graduation Requirements .....76 Credit Hours

MEDICAL OFFICE ADMINISTRATION DIPLOMA - D25310

-Online

This curriculum prepares individuals for entry-level medical administrative support positions with an emphasis on insurance billing, and coding. These positions include medical records clerk, insurance specialist, and patient services representative. Coursework includes medical records, medical law/ethics, billing and coding, and office procedures. Employment opportunities include healthcare facilities, insurance billing offices, labs, and manufacturers of medical equipment.

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3

Major Courses

OST	122	Office Computations	2
OST	131	Keyboarding	2
OST	134	Text Entry and Formatting	3
OST	137	Office Software Applications	3
OST	141	Medical Terms I - Medical Office	3
OST	142	Medical Terms II - Medical Office	3
OST	148	Medical Coding, Billing, and Insurance	3
OST	149	Medical Legal Issues	3
OST	164	Text Editing Applications	3
OST	181	Introduction to Office Systems	3
OST	243	Medical Office Simulation	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2

Graduation Requirements .....41 Credit Hours

MEDICAL OFFICE SPECIALIST–C25310A

-Online

The Medical Office Specialist certificate program provides the medical and computer skills necessary for entry-level employment in medical settings. This program provides training in medical terminology, word processing, records management, and medical software. Employment opportunities include hospitals, medical offices, research facilities, health insurance companies, billing agencies, and allied health facilities.

Major Courses

OST	136	Word Processing	3
OST	141	Medical Terms I-Medical Office	3
OST	142	Medical Terms II-Medical Office	3
OST	148	Medical Coding, Billing, and Insurance	3
OST	184	Records Management	3

OST 243 Medical Office Simulation 3
Completion Requirements ..... 18 Credit Hours

MEDICAL DOCUMENT SPECIALIST-C25310C

-Online

The Medical Document Specialist certificate program is designed to prepare students to produce accurate medical documents from electronic media and audio recordings. This concentrated program provides training in keyboarding, transcription, proofreading, editing, and medical terminology. Employment opportunities include positions in medical offices, hospitals, private transcription businesses, and home offices.

Major Courses

OST 134 Text Entry and Formatting 3
OST 136 Word Processing 3
OST 141 Medical Terms I – Medical Office 3
OST 142 Medical Terms II – Medical Office 3
OST 164 Text Editing Applications 3
OST 241 Medical Office Transcription I 2
Completion Requirements ..... 17 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

College/ University Transfer

ASSOCIATE IN ARTS (A.A.)
Dean Diane Lodder
Phone: 919-866-5198
Email: delodder@waketech.edu

ASSOCIATE IN ARTS (A.A.) DEGREE - A10100

OFFICIAL CURRICULUM SCHEDULE

COURSE REQUIREMENTS **CREDIT HOURS**

Composition 6
ENG 111
ENG 112 or ENG 113 or ENG 114

Humanities/Fine Arts 12
Select 4 courses from at least 3 discipline areas.

At least 1 literature course and either COM 110 or COM 231 is required.

Required foreign language labs count as electives.

ART 111, 114, 115, 116, 117
CHI 111 (and 181), 112 (and 182), 211, 212
COM 110, 120, 140, 231
DRA 111, 112, 115, 122, 126
ENG 231, 232, 241, 242, 261, 262
FRE 111 (and 181), 112 (and 182), 211 (and 281) 212 (and 282)
HUM 110, 115, 121, 122, 130, 160, 161, , *220
MUS 110, 112, 113, 114, 210, 212, 213
PHI 210, 215, 220, 221, 230, 240
REL 110, 111, 112, 211, 212, 221
SPA 111 (and 181), 112 (and 182), 211 (and 281), 212 (and 282)

Social/Behavioral Sciences 12
Select 4 courses from at least 3 discipline areas.
At least 1 history course is required.

ANT 210, 220, 221, 230 (and 230A), 240
ECO 151, 251, 252
GEO 111, 112
HIS 111, 112, 121, 122, 131, 132
POL 110, 120, 210
PSY 150, 237, 239, 241, 281
SOC 210, 213, 220, 225, 230

Natural Sciences 8
Select from the following list. **(If you select BIO 110, you may not select BIO 111 or BIO 112.)**

(**AST** 111 and 111A), (151 and 151A), (152 and 152A)
BIO 110, 111, 112, 120, 130, (140 and 140A)
CHM 131 and 131A), 151, 152
GEL 111, 113, 120, 230
PHY 151, 152, 251, 252

Mathematics 6
Note: Required math labs count as electives

A. Select **1 course (and lab)** from the following list.

MAT 140 (and 140A)
MAT 161 (and 161A)
MAT 171 (and 171A)

B. Select **1 course (and lab)** from the following list.
***If** MAT 161 was selected from List A, then MAT 171 or MAT 175 may not be selected.

***If** MAT 171 was selected from List A, then MAT 161 or MAT 175 may not be selected.)

MAT 151 (and 151A)
MAT 155 (and 155A)
MAT 161 (and 161A)
MAT 165 (and 165A)
MAT 171 (and 171A)
MAT 172 (and 172A)
MAT 175 (and 175A)
MAT 263 (and 263A)
MAT 271
MAT 272
MAT 273

Electives 20
Select from entire list of courses below.

Graduation Requirements…….64 Credit Hours

COURSE LIST

Associate in Arts (A.A.) - A10100

ACA 122**,**
ACC 120, 121
ANT 210, 220, 221, 230, 230A, 240, 245
ARA 111, 112, 181, 182, 211, 212
ART 111, 113, 114, 115, 116, 117, 121, 122, 130, 131, 132, 140, 214, 231, 240, 244, 260, 281, 282, 288
AST 111, 111A, 151, 151A, 152, 152A
BIO 110, 111, 112, 120, 130, 140, 140A, 145, 150, 155, 163, 165, 166, 168, 169, 180, 230, 231, 232, 242, 243, 250, 275 **(**You may **not select both** BIO 110 and BIO 111.)
BUS 110, 115, 137, 228/ CHI 111, 112, 181, 182, 211, 212
CHM 130, 130A, 131, 131A, 151, 152, 251, 252, 261
CIS 110, 115
COE 111
COM 110, 111, 120, 130, 140, 150, 160, 231, 232, 233, 251/
CSC 120, 130, 134, 136, 139, 151, 220, 239/CTS 115
DFT 170
DRA 111, 112, 115, 120, 122, 124, 126, 128, 130, 131, 132, 135, 140, 141, 145, 150, 170, 171, 230, 231, 243, 260, 270, 271
ECO 151, 251, 252
EDU 144, 145, 146, 216, 221
ENG 111A, 112, 113, 114, 125, 126, 131, 231, 232, 234, 241, 242, 253, 261, 262, 271, 272, 273, 274, 275
EGR 150, 220
FRE 111, 112, 141, 151, 161, 181, 182, 211, 212, 221, 281, 282
GEL 111, 113, 120, 230
GEO 110, 111, 112
HEA 110, 112
HIS 111, 112, 117, 121, 122, 131, 132,151, 162,167, 216, 221, 222, 223,, 226, 231, 236, 241, 242, 251, 252, 271
HUM 110,, 115, 121, 122, 130, 160, 161, 170, , 220, 230
JOU 110, 217, 242

MAT 140, 140A, 141, 141A, 142, 142A, 151, 151A, 155, 155A, 161, 161A, 165, 165A, 167, 167A, 171, 171A, 172, 172A, 175, 175A, 263, 263A, 271, 272, 273, 280, 285
MSI 110,120, 210, 220
MUS 110, 111, 112, 113, 114, 121, 122, 131, 132, 135, 136, 141, 142, 151, 152, 161, 162, 210, 212, 213, 214, 231, 232, 241, 242, 261, 262
PED 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 125, 126, 128, 129, 130, 131, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 150, 151, 154, 155, 169, 170, 171, 172, 174, 175, 176, 177, 183, 186, 187, 210, 211, 217, 218, 220
PHI 210, 215, 220, 221, 230, 240, 250
PHY 151, 152, 153, 251, 252
POL 110, 120, 130, 210
PSY 150, 231, 237, 239, 241, 246, 259, 263, 281
REL 110, 111, 112, 211, 212, 221
SOC 210, 213, 220, 225, 230, 242, 245, 252
SPA 111, 112, 141, 151, 161, 181, 182, 211, 212, 221, 281, 282

TRANSFER CORE DIPLOMA (ARTS) - D10100

OFFICIAL CURRICULUM SCHEDULE

COURSE REQUIREMENTS **CREDIT HOURS**

Composition 6
ENG 111
ENG 112 or ENG 113 or ENG 114

Humanities/Fine Arts 12
Select 4 courses from at least 3 discipline areas.
At least 1 literature course and either COM 110 or COM 231 is required.

ART 111, 114, 115, 116,117
CHI 111, 112, 211, 212
COM 110, 120, 140, 231
DRA 111, 112, 115, 122, 126
ENG, 231, 232, 241, 242, 261, 262
FRE 111 , 112, 211 , 212
HUM 110, 115, 121,122, 130, 160, 161, *220
MUS 110, 112, 113, 114, 210, 212, 213
PHI 210, 215, 220, 221, 230, 240
REL 110, 111, 112, 211, 212, 221
SPA 111, 112, 211, 212

Social/Behavioral Sciences 12
Select 4 courses from at least 3 discipline areas.
At least 1 history course is required.

ANT 210, 220, 221, (230 and 230A), 240
ECO 151, 251, 252
GEO 111, 112
HIS 111, 112, 121, 122, 131, 132
POL 110, 120, 210
PSY 150, 237, 239, 241, 281
SOC 210, 213, 220, 225, 230

Natural Sciences 8
Select from the following list. (If you select BIO 110, you may not select BIO 111 or BIO 112.)

AST (111 and 111A), (151 and 151A), (152 and 152A)
BIO 110, 111, 112, 120, 130, (140 and 140A)
CHM (131 and 131A), 151, 152
GEL 111, 113, 120, 230
PHY 151, 152, 251, 252

Mathematics 6

A. Select **1 course (and lab)** from the following list.

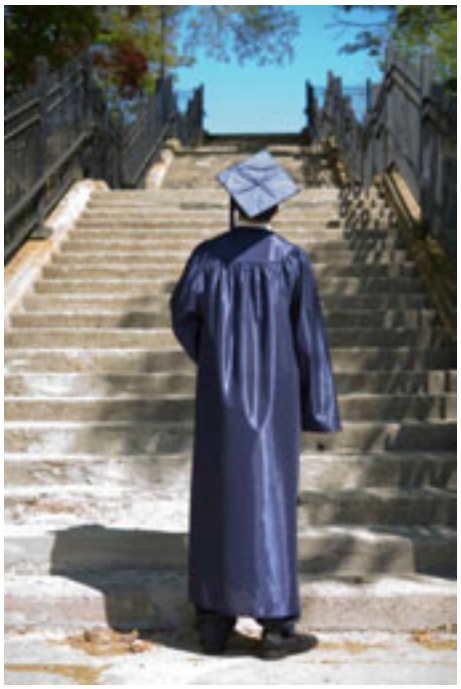
MAT 140 (and 140A)
MAT 161 (and 161A)
MAT 171 (and 171A)

B. Select **1 course (and lab)** from the following list.
***If** MAT 161 was selected from List A, then MAT 171 or MAT 175 **may not** be selected.

***If** MAT 171 was selected from List A, then MAT 161 or MAT 175 **may not** be selected.)

MAT 151 (and 151A)
MAT 155 (and 155A)
MAT 161 (and 161A)
MAT 165 (and 165A)
MAT 171 (and 171A)
MAT 172 (and 172A)
MAT 175 (and 175A)
MAT 263 (and 263A)
MAT 271
MAT 272
MAT 273

General Education Core Requirements ..... **44 Credit Hours**



College/ University Transfer

ASSOCIATE IN SCIENCE (A.S.)
ASSOCIATE IN SCIENCE PRE-MAJOR: ENGINEERING (A.S.)

Dean Cheryl Keeton
Phone: 866-5968
Email: clkeeton@waketech.edu

ASSOCIATE IN SCIENCE (A.S.) DEGREE - A10400

OFFICIAL CURRICULUM SCHEDULE

COURSE REQUIREMENTS **CREDIT HOURS**

Composition 6
ENG 111
ENG 112 or ENG 113 or ENG 114

Humanities/Fine Arts 9
Select 3 courses from 3 discipline areas.

One literature course is required; select from the following:
ENG 131, 231, 232, 241, 242, 261, 262.

Select 2 additional courses from 2 of the following discipline areas:
ART 111, 114, 115, 116, 117
COM 110, 120, 231
DRA 111, 112, 115, 122, 126
FRE (111 and 181)
HUM 110, 115, 130, 160, 211, 212, or 220
MUS 110, 112, 113, 114, 213
PHI 210, 215, 220, 221, 240
REL 110, 111, 112, 211, 212
SPA (111 and 181)

Social/Behavioral Sciences 9
Select 3 courses from 3 discipline areas. **One history course is required**; select from the following:
HIS 111, 112, 121, 122, 131, 132.

Select 2 additional courses from 2 of the following discipline areas:
ANT 210
ECO 251, 252
GEO 111, 112
POL 110, 120, 210
PSY 150
SOC 210, 213, 220, 225

Natural Sciences 8
Select one of the following sequences.
BIO 111 and 112
CHM 151 and 152
PHY 151 and 152
PHY 251 and 252

Mathematics 6
MAT (171 and 171A), (172 and 172A)
Higher mathematics courses may be substituted if placement warrants.

Additional Natural Sciences/Mathematics 6
AST 11, 111A, 151, 151A, 152, 152A
BIO 110, 111, 112, 120, 130, 140, 140A **(**You **may not select both** BIO 110 and BIO 111.)
CHM 151, 152
GEL 111, 113, 120, 230
MAT (151 and 151A) or (155 and 155A), (175 and 175A), 271, 272, 273 (You **may not select both** MAT 151/151A and MAT 155/155A.)
PHY 151, 152, 251, 252 (You **may not select both** PHY 151/152 and PHY 251/252.)

Mathematics, Natural Sciences, or Computer Science Electives 14
A minimum of 14 hours in mathematics, natural sciences, or computer sciences is required

AST 111, 111A, 151, 151A, 152, 152A
BIO 110, 111, 112, 120, 130, 140, 140A, 145, 150, 168, 169, 230, 231, 232, 242, 243, 250, 275 **(**You **may not select both** BIO 110 and BIO 111.)
CHM 151, 152, 251, 252, 261
CIS 110, 115
CSC 120, 130, 134, 136, 139, 151, 239
GEL 111, 113, 120, 230
MAT (151 and 151A) or (155 and 155A), (167 and 167A), (175 and 175A), 271, 272, 273, 280, 285 (You **may not select both** MAT 151/151A and MAT 155/155A.)
PHY 151, 152, 251, 252 (You **may not select both** PHY 151/152 and PHY 251/252.)

Other Electives 6
Select from A.S. Course List.

Graduation Requirements ..... **64 Credit Hours**

COURSE LIST

ASSOCIATE IN SCIENCE (A.S.) — A10400

ACA 115
ACC 120, 121
ANT 210, 220, 221, 230, 230A, 240
ART 111, 113, 114, 115, 116, 117, 121, 122, 130, 131, 132, 140, 240, 244, 281
AST 111, 111A, 151, 151A, 152, 152A
BIO 110, 111, 112, 120, 130, 140, 140A, 168, 169, 275
BUS 110, 115, 137
CHM 151, 152, 251, 252, 261
CIS 110, 115
CJC 111, 121, 141
COE 111
COM 110, 111, 120, 130, 231, 232, 233, 251
CSC 120, 130, 134, 136, 139, 151, 239
DFT 170
DRA 111, 112, 115, 120, 122, 124, 126,128, 130, 131, 140, 141
ECO 151, 251, 252
EDU 216
EGR 150, 210, 211, 212, 213, 220, 225, 228, 230
ENG 111A, 113, 114, 125, 126, 131, 231, 232, 234, 241, 242, 253, 261, 262, 271, 272, 273, 274, 275
FRE (111 and 181), (112 and 182), 141, 151, 161, (211 and 281) (212 and 282)
GEL 111, 113, 120, 230
GEO 111, 112
HEA 110, 112
HIS 111, 112, 117, 121, 122, 131, 132, 161, 162, 167, 216, 221, 222, 223, 226, 236, 251, 252
HUM 110, 115, 130, 160, 161, 170, 211, 212, 220, 230
JOU 110
MAT (141 and 141A), (142 and 142A), (151 and 151A), (155 and 155A), (167 and 167A), 171A, 172A,

(175 and 175A), 271, 272, 273, 280, 285
MUS 110, 111, 112, 113, 114, 131, 132, 141, 142, 151, 161, 210, 212, 213, 214, 231, 232
PED 110, 121, 128, 130, 138, 139, 143, 175, 176, 177
PHI 210, 215, 220, 221, 230, 240
PHY 151, 152, 153, 251, 252
POL 110, 120, 130, 210
PSY150, 237, 239, 241, 246, 259, 263, 281
REL 110, 111,112, 211, 212
SOC 210, 213, 220, 225, 242, 252
SPA (111 and 181), (112 and 182), 141, 151, 161, (211 and 281), (212 and 282), 221

TRANSFER CORE DIPLOMA (SCIENCE) - D10400

OFFICIAL CURRICULUM SCHEDULE

COURSE REQUIREMENTS **CREDIT HOURS**

Composition.....6
ENG 111
ENG 112 or ENG 113 or ENG 114

Humanities/Fine Arts 9
Three (3) courses from three (3) discipline areas are required.

One (1) literature course is required; select from the following:
ENG 131, 231, 241, 242, 261, 262

Select two (2) additional courses from two of the following discipline areas:

ART 111, 114, 115, 116, 117
COM 110, 120, 231
DRA 111, 112, 115, 122, 126
FRE (111 and 181)
HUM 110, 115, 130, 160, 211, 212, 220
MUS 110, 112, 113, 114, 213
PHI 210, 215, 220, 221, 240
REL 110, 111, 112, 211, 212
SPA (111 and 181)

Social/Behavioral Sciences.....9
Three (3) courses from three (3) discipline areas are required.

One (1) history course is required; select from the following:
HIS 111, 112, 121, 122, 131, 132

Select two (2) additional courses from two (2) of the following discipline areas:
ANT 210
ECO 251, 252
GEO 111, 112
POL 110, 120, 210
PSY 150
SOC 210, 213, 220, 225

Natural Sciences 8
Select one (1) of the following two-course sequences:

BIO 111 and 112
CHM 151 and 152
PHY 151 and 152
PHY 251 and 252

Mathematics 6
(MAT 171 and 171A), (172 and 172A)

Higher mathematics courses may be substituted if placement warrants.

Additional Natural Sciences/ Mathematics Requirements 6
AST 111, 111A, 151, 151A, 152, 152A
BIO 110, 111, 112, 120, 130, 140, 140A (You **may not select both** BIO 110 and BIO 111)
CHM 151, 152
GEL 111, 113, 120, 230
MAT (151 and 151A) or (155 and 155A), (175 and 175A), 271, 272, 273 (You **may not select both** MAT 151/151A and MAT155/155A)
PHY 151, 152, 252 (You **may not select both** PHY 151/152 and PHY 251/252)
General Education Core Requirements..... 44 Credit Hours

ASSOCIATE IN SCIENCE (A.S.) DEGREE PRE-MAJOR: ENGINEERING - A1040D

OFFICIAL CURRICULUM SCHEDULE

COURSE REQUIREMENTS **CREDIT HOURS**

Composition 6
ENG 111
ENG 112 or ENG 113 or ENG 114

Humanities/Fine Arts 9
Select 3 courses from 3 discipline areas.
One literature course is required; select from the following:
ENG 131, 231, 232, 241, 242, 261, 262.

Select 2 additional courses from 2 of the following discipline areas:

ART 111, 114, 115, 116, 117
COM 110, 120, 231
DRA 111, 112, 115, 122, 126
FRE (111 and 181)
HUM 110, 115, 130, 160, 211, 212,220
MUS 110, 112, 113, 114, 213
PHI 210, 215, 220, 221, 240
REL 110, 111, 112, 211, 212
SPA (111 and 181)

Social/Behavioral Sciences 9

Select 3 courses from 3 discipline areas.
One history course is required; select from the following:
HIS 111, 112, 121, 122, 131, 132.

Select 2 additional courses from two of the following discipline areas:

ANT 210
ECO 251, 252 (One ECO course is recommended.)
GEO 111, 112
POL 110, 120, 210
PSY 150
SOC 210, 213, 220, 225

Natural Sciences 12
The following courses are required:
CHM 151
PHY 251
PHY 252

Mathematics 8
The following courses are required:
MAT 271 and MAT 272

Other Required Hours 20-21

MAT 273 and MAT 285
One of the following courses is required: CSC 134 or CSC 136 or CSC 151

Students must select one of the following courses:
CHM 152 or DFT 170 or EGR 220

Note: If CHM 152 is not selected, then a minimum of 4 additional credit hours in Mathematics, Natural Sciences, or Computer Sciences is also required.

An additional 7 hours of approved college transfer courses are required. Choose from the following:

ACA 115/
ACC 120, 121
ANT 210, 220, 221, 230, 230A, 240
ART 111, 113, 114, 115, 116, 117, 121, 122, 130, 131, 132, 140, 240, 244, 281
AST 111, 111A, 151, 151A, 152, 152
BIO 111,112, 120, 130, 140, 140A, 168, 169, 275
BUS 110, 115, 137
CHM 152, 251, 252, 261
CIS 110, 115/
CJC 111
COE 111
COM 110, 111, 120, 130, 231, 232, 233, 251
CSC 120, 130,134, 136, 139, 151, 239
DFT 170
DRA 111, 112, 115, 120, 122, 124, 126, 128, 130, 131, 140, 141
ECO 251, 252
EDU 216
EGR 150, 210, 211, 212, 213, 220, 225, 228, 230
ENG 111A, 125, 126, 131, 231, 232, 234, 241, 242, 253, 261, 262, 271, 272, 273, 274, 275
FRE (111 and 181), (112 and 182), (211 and 281), (212 and 282)
GEL 113, 120, 230
GEO 111, 112
HEA 110, 112
HIS 111, 112, 117, 121, 131, 132, 161, 162, 167, 216, 221, 222, 223, 226, 236, 251, 252
HUM 110, 115, 130, 160, 161, 170, 211, 212, 220, 230
JOU 110
MAT (151 and 151A) or (155 and 155A),167, 280
MUS 110, 111, 112, 131, 132
PED 110, 121, 128, 130, 138, 139, 143, 175, 176, 177
PHI 210, 215, 220, 221,230, 240
POL 110, 120, 130, 210
PSY 150, 237, 239, 241, 246, 259, 263, 281
REL 110, 111, 112, 211, 212
SOC 210, 213, 220, 225, 242, 252
SPA (111 and 181), (112 and 182), (211 and 281), (212 and 282)

Graduation Requirements.....64-65 Credit Hours

COMPUTER & ENGINEERING TECHNOLOGY

Computer & Engineering Technologies (CET)

Dean Angela Bequette
Phone: 919-866-5394
Email: albequette@waketech.edu

The table below shows the current degrees, diplomas, and certificates the CET division offers. The highest credential given in each area is listed first, in bold type.

The "Program Offered" column represents when the program is offered:

D = Day
E = Evening
O = Distance learning or Online learning

Program Name	Program Offered	Program Code
Advertising and Graphic Design – *AAS Degree*	D, E	A30100
Digital Media **– *Certificate***	D	C30100C
Graphics and Design **– *Certificate***	O	C30100A
Web and Graphic Design **- *Certificate***	O	C30100B
Architectural Technology – *AAS Degree*	D	A40100
Architectural CAD **- *Certificate***	D, E	C40100A
Associate in Science (Pre-Major: Engineering) – *AAS Degree*	D, E	A1040D
BioPharmaceutical Technology – *AAS Degree*	D	A20180
Applied Biotechnology **- *Certificate***	D	C20180A
Civil Engineering Technology – *AAS Degree*	D, E	A40140
Civil Design **- *Certificate***	D, E	C40140A
Computer Engineering Technology – *AAS Degree*	D, E	A40160
C Language Programming **- *Certificate***	D, E	C40160B
Computer Information Technology – *AAS Degree*	D, E	A25260
Computer Forensics **- *Certificate***	D, E	C25260J
Hardware Troubleshooting **- *Certificate***	D, E	C25260G
Healthcare Informatics **- *Certificate***	D, E, O	C25260N
IT Foundations **- *Certificate***	D, E, O	C25260M
IT Support Management **- *Certificate***	D, E	C25260L
IT Support Technician **- *Certificate***	D, E	C25260K
Microsoft Application Specialist (MCAS) **- *Certificate***	D, E, O	C25260A
Open Source IT **- *Certificate***	D, E, O	C25260O
Spreadsheet Specialist **- *Certificate***	D, E, O	C25260E
Computer Programming – *AAS Degree*	D, E, O	A25130
C++ Programming **– *Certificate***	D, E, O	C25130C
JAVA Programming **– *Certificate***	D, E, O	C25130A
Visual BASIC Programming **– *Certificate***	D, E, O	C25130B
Visual C# Programming **- *Certificate***	D, E, O	C25130C
Database Management – *AAS Degree*	D, E	A25150
Oracle DBA Programming **– *Certificate***	D, E, O	C25150B
Oracle Developer **- *Certificate***	D, E, O	C25150A
Electronics Engineering Technology – *AAS Degree*	D, E	A40200
Basic Electronics **– *Certificate***	D, E	C40200A
PLC Programming **– *Certificate***	D, E	C40200B
Robotics **- *Certificate***	D, E	C40200C
Environmental Science Technology – *AAS Degree*	D	A20140
Industrial Engineering Technology – *AAS Degree*	D, E	A40240
Advanced Quality **– *Certificate***	D, E, O	C40240C
Industrial Management **– *Certificate***	D, E, O	C40240A
Manufacturing Process Control **- *Certificate***	D, E, O	C40240D
Quality Assurance **- *Certificate***	D, E, O	C40240B

COMPUTER & ENGINEERING TECHNOLOGY

Program Name Continued	Program Offered	Program Code
Information Systems Security – ***AAS Degree***	D, E	A25270
Network Security Admin ***- Certificate***	D, E	C25270A
Interior Design – ***AAS Degree***	E	A30220
Landscape Architecture Technology – ***AAS Degree***	D	A40260
Landscape Architecture ***- Certificate***	D	C40260A
Mechanical Engineering Technology – ***AAS Degree***	D, E	A40320
Engineering Fundamentals ***– Certificate***	D, E, O	C40320F
Engineering Management ***– Certificate***	D, E, O	C40320E
Materials Engineering ***– Certificate***	D, E, O	C40320D
Mechanical Design ***– Certificate***	D, E, O	C40320B
Thermal Mechanics ***- Certificate***	D, E, O	C40320C
Networking Technology – ***AAS Degree***	D, E	A25340
Cisco Certified Network Associate (CCNA) ***- Certificate***	D, E	C25340C
Cisco Certified Network Professional (CCNP) ***- Certificate***	D, E	C25340I
Linux/Red Hat Administration ***- Certificate***	D, E	C25340K
Microsoft Certified Systems Administrator (MCSA) ***- Certificate***	D, E, O	C25340J
Simulation and Game Development – ***AAS Degree****	D, E	A25450
Game Programming and Design ***– Diploma***	D, E	D25450A
Modeling and Animation ***– Diploma***	D, E	D25450B
Modeling and Animation ***– Certificate***	D, E	C25450A
Production ***- Certificate***	D, E	C25450B
Surveying Technology – ***AAS Degree***	D, E	A40380
Web Technologies – ***AAS Degree***	D, O	A25290
Mobile Content Development ***- Diploma***	D, O	D25290
Android Application Developer ***- Certificate***	O	C25290E
E-Commerce Programming ***- Certificate***	O	C25290B
iOS Application Developer ***- Certificate***	O	C25290D
Web Designer ***- Certificate***	O	C25290C
Web Developer ***- Certificate***	O	C25290A

***Collaborative Agreements:**

Simulation and Game Development AAS degree – Level III instruction Service Agreement with Pitt Community College, Nash Community College, Wayne Community College, and Wilson Community College

Advertising & Graphic Design

The Advertising and Graphic Design curriculum is designed to provide students with knowledge and skills necessary for employment in the graphic design profession that 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, and a wide variety of manufacturing industries, newspapers, and businesses with in-house graphics operations.

ADVERTISING AND GRAPHIC DESIGN — A30100

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Math Elective	3
___	___	Social/Behavioral Science Elective	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
HUM	230	Leadership Development	3
ART	111	Art Appreciation	3
ART	115	Art History Survey II	3
ART	116	Survey of American Art	3
ART	117	Non-Western Art History	3

Mathematics Elective

(Select 3.0 hours from the following courses)

MAT	115	Mathematical Models	3
MAT	145	Analytical Math	3
MAT	145A	Analytical Math Lab	1
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Pre-Calculus Algebra	3
MAT	171A	Pre-Calculus Algebra Lab	1
MAT	121	Algebra/Trigonometry	3

Communication Elective

(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3

Major Courses

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	151	Computer Design Basics	3
GRD	152	Computer Design Technology I	3
GRD	153	Computer Design Technology II	3
GRD	167	Photographic Imaging I	3
GRD	241	Graphic Design III	4
GRD	242	Graphic Design IV	4
GRD	265	Digital Print Production	3
GRD	271	Multimedia Design 1	2
GRD	280	Portfolio Design	4
GRD	282	Advertising Copywriting	2
GRD	285	Client/Media Relations	2
WEB	140	Web Development Tools	3
WEB	210	Web Design	3
WEB	140	Web Development Tools	… 3

Major Electives List 1

Select 4.0 hours from the following courses

CIS	110	Introduction to Computers	3
COE	112	Co-op Work Experience I	3
GRD	111	Typography II	3
GRD	168	Photographic Imaging II	3
GRD	175	3-D Animation Design	3
GRD	192	Selected Topics	2
GRD	230	Technical Illustration	2
WEB	111	Introduction to Web Graphics	3

Major Electives List 2

Select 2.0 hours from the following courses

GRD	232	Fashion Illustration	2
GRD	263	Illustrative Imaging	3
GRD	292	Selected Topics	2
SGD	114	3D Modeling	3
WEB	110	Internet/Web Fundamentals	3
WEB	120	Intro Internet Multimedia	3
WEB	211	Advanced Web Graphics	3

Graduation Requirements..... 72 Credit Hours

ADVERTISING AND GRAPHIC DESIGN: GRAPHICS AND DESIGN — C30100A

-Online Only

The Graphics and Design certificate curriculum is designed to provide students with knowledge and skills necessary for employment in the graphic design profession. It emphasizes the use of typography and computer technology in 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, and a wide variety of manufacturing industries, newspapers, and businesses with in-house graphics operations.

GRD	110	Typography I	3
GRD	141	Graphic Design	4
GRD	151	Computer Design Basics	3
GRD	152	Computer Design Technology I	3
GRD	153	Computer Design Technology II	3

Completion Requirements 16 Credit Hours

WEB AND GRAPHIC DESIGN — C30100B

--Online Only

The Web and Graphic Design certificate curriculum is designed to provide students with the knowledge and skills necessary for employment in the graphic design profession. It emphasizes design, advertising, illustration, and digital and multimedia preparation of electronic, especially Web-based, promotional materials.

Students will be trained in the use of typography, computer design, and Web development tools to develop concept and design for electronic media promotional materials.

Graduates should qualify for employment opportunities with graphic design studios, advertising agencies, printing companies, department stores, and a wide variety of manufacturing industries, newspapers, and businesses with in-house graphics operations.

GRD	110	Typography I	3
GRD	151	Computer Design Basics	3
GRD	152	Computer Design Technology I	3
WEB	111	Introduction to Web Graphics	3
WEB	140	Web Development Tools	3
WEB	210	Web Design	3

Completion Requirements ..... 18 Credit Hours

Digital Media- C30100C

Day or Online

Students will learn the skills to create static and animation 2D and 3D digital graphic plus interactive multimedia using industry standard tools.

GRD	151	Computer Design Basics	3
GRD	152	Computer Design Tech I	3
GRD	175	3D Animation Design	3
GRD	271	Multimedia Design I	2
WEB	111	Introduction to Web Graphics	3
WEB	120	Introduction to Internet Multimedia	3

Completion Requirements ..... 17 Credit Hours

Architectural Technology

The Architectural Technology curriculum provides 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.

ARCHITECTURALTECHNOLOGY - A40100

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra and Trigonometry	3
___	___	Humanities/Fine Arts Elective	3
___	___	Social/Behavioral Science Elective	3

Major Courses

ARC	111	Introduction to Architectural Technology	3
ARC	112	Construction Materials and Methods	4
ARC	113	Residential Architectural Technology	3
ARC	114	Architectural CAD	2
ARC	114A	Architectural CAD Lab	1
ARC	131	Building Codes	3
ARC	211	Light Construction Technology	3
ARC	212	Commercial Construction Technology	3
ARC	213	Design Project	4
ARC	214	Architectural Statics	3
ARC	215	Architect Strength of Materials	3
ARC	220	Advanced Architectural CAD	2
ARC	230	Environmental Systems	4
ARC	240	Site Planning	3
ARC	250	Survey of Architecture	3
ARC	264	Digital Architecture	2

Co-op Work Experience

COE	112	Co-op Work Experience I	2
COE	122	Co-op Work Experience II	2

Humanities/Fine Arts

(Select 3 credit hours from the following courses)

ATR	111	Art Appreciation	3
ATR	114	Art History Survey I	3
DRA	111	Theatre Appreciation	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
MUS	110	Music Appreciation	3
PHI	210	History of Philosophy	3
REL	110	World Religions	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

ECO	151	Survey of Economics	3
ECO	251	Prin. Of Microeconomics	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
POL	110	Intro Political Science	3
POL	130	State & Local Government	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	220	Social Problems	3

Major Electives

(Select 8 credit hours from the following courses)

ARC	221	Architectural 3-D CAD	3
ARC	235	Architectural Portfolio	3
ARC	241	Contract Administration	2
ARC	261	Solar Technology	2
ARC	293	Selected Topics	3
CIV	125	Civil/Surveying CAD	3
CIV	230	Construction Estimating	3
LAR	230	Principles of Horticulture I	4
LAR	231	Principles of Horticulture II	3
SRV	110	Surveying I	4

Graduation Requirements ..... 73 Credit Hours

ARCHITECTURAL CAD — C40100A

-Day and Evening

The evening Architectural CAD certificate is designed for students employed full-time in architectural engineering or construction positions that require microcomputer knowledge. Courses include basic hands-on architectural drafting in residential construction and computer courses in different types of computer-aided drafting software from basic to advanced levels.

Opportunities for employment exist as junior technicians within architectural practices and engineering and contracting companies.

Courses in this program can be transferred directly into the Architectural Technology associate degree program.

ARC	111	Introduction to Architectural Technology	3
ARC	114	Architectural CAD	2
ARC	220	Advanced Architectural CAD	2
ARC	221	Architectural 3-D CAD	3
CIV	125	Civil/Surveying CAD	3

Completion Requirements ..... 13 Credit Hours

Biopharmaceutical Technology

The BioPharmaceutical Technology curriculum is designed to prepare graduates for employment in pharmaceutical manufacturing and related industries, including chemical quality assurance, microbiological quality assurance, product inspection, documentation review, manufacturing, and product/process validation.

Biopharmaceutical Technology — A20180

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
___	___	Humanities/Fine Arts Elective	3
___	___	Social/Behavior Science Elective	3
MAT	121	Algebra/Trigonometry	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
HUM	230	Leadership Development	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

PSY	118	Interpersonal Psychology	3
SOC	210	Introduction to Sociology	3

Major Courses

BIO	110	Principles of Biology	4
BPM	110	BioProcess Practices	5
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
CHM	132	Organic and Biochemistry	4
EGR	115	Introduction to Technology	3
ENV	212	Instrumentation	4
ISC	112	Industrial Safety	2
PTC	110	Industrial Environnent	3
PTC	120	Pharmaceutical Quality Control	4
PTC	210	Pharmaceutical Industrial Processes	4
PTC	212	Applied Microbiology	4
PTC	214	Parenteral Processes	4
PTC	222	Pharmaceutical Process Control	3
PTC	226	Validation	3
PTC	228	Pharmaceutical Issues	1
COE Requirement			6

Graduation Requirements ..... 73 Credit Hours

* Cooperative education (6 hours) or an equivalent is required during these terms. Students must have approval from the Dean and pre-register with the Co-op Office.

Applied Biotechnology Certificate - C20180A

The BioPharmaceutical Technology Certificate shows the student how biotechnology is applied to solving problems and how it has been used to develop test methods, treat wastes, formulate pharmaceuticals or develop alternatives to current harmful chemical uses. This certificate program will show the student how biotechnology is being used and look to the future of biotechnological applications. Students will also be exposed to how the regulatory authorities evaluate new processes and products developed by biotechnology

PTC	110	Industrial Environment	3
ENV	110	Environmental Science	3
ENV	110A	Environmental Science Lab	1
BPM	110	BioProcess Practices	5
ENV	232	Site Assessment and Remediation	3

Completion Requirements ..... 15 Credit Hours

Civil Engineering Technology

The Civil Engineering Technology curriculum provides the application of relevant theory of engineering needed by technicians to carry out planning and supervisory tasks in the construction of transportation systems, residential and commercial buildings, bridges, dams, and water and wastewater treatment systems.

Course work includes the communication and computational skills required to support the fields such as materials testing, structures, estimating, project management, hydraulics, environmental technology, and surveying. Additional course work will cover the operation of computers and application software including computer-aided drafting.

Graduates should qualify for technician-level jobs with both public and private engineering, construction, and surveying agencies and are also eligible to continue on at East Carolina University and UNC-Charlotte as a junior.

CIVIL ENGINEERING TECHNOLOGY - A40140

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
MAT	121	Algebra and Trigonometry	3
___	___	Humanities/Fine Arts Elective	3
___	___	Social/Behavioral Science Elective	3

Communication Elective

(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
ART	111	Art Appreciation	3
REL	110	World Religion	3
DRA	111	Theater Appreciation	3
MUS	110	Music Appreciation	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

ANT	210	General Anthropology	3
ECO	151	Survey of Economics	3
ECO	251	Principles of Microeconomics	3
GEO	110	Introduction to Geography	3

GEO	111	World Regional Geography	3
HIS	111	World Civilization I	3
HIS	121	Western Civilization I	3
HIS	131	American History I	3
POL	110	Introduction to Political Science	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3

Major Electives
(Choose 13 credit hours from the following)

GIS	112	Introduction to GPS	3
GIS	120	Introduction to Geodesy	3
CIV	125	Highway Technology	2
CIV	250	Civil Eng. Tech. Project	2
SRV	297	Selected Topic	3
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
DFT	119	Basic CAD	2
MAT	122	Algebra/Trigonometry	3
MAT	223	Applied Calculus	3

Major Courses

CIV	110	Static/Strength of Materials	4
CIV	111	Solis and Foundations	3
CIV	125	Civil/Surveying CAD	3
CIV	210	Engineering Materials	2
CIV	211	Hydraulics and Hydrology	3
CIV	230	Construction Estimating	3
CIV	240	Project Management	3
DFT	110+	Basic Drafting	2
EGR	115	Introduction to Technology	3
PHY	131	Physics - Mechanics	4
GIS	111	Introduction to GIS	3
SRV	110	Surveying I	4
SRV	111	Surveying II	4
___	___	Major Elective	13

Graduation Requirements ..... 69 Credit Hours

* Max of 3 credit hours of COE
+ Course substitution allowed is ARC 114

CIVIL ENGINEERING TECHNOLOGY: CIVIL DESIGN - C40140A

- Day

The Civil Engineering Technology Certificate allows students to complete the certificate in two to three semesters. Students are then able to work in the civil field. This certificate is designed to address the all time high demand for technicians, and to train for jobs in these fields with just a small amount of college. This certificate is for students that are not sure which path they would like to follow. The Civil Design certificate will allow you to work as an engineering technician in engineering offices throughout the country. One job function would be to place ideas down on the computer by working directly with an engineer.

DFT	110	Basic Drafting	2
DFT	119	Basic CAD	2
GIS	111	Introduction to GIS	3
SRV	110	Surveying I	4
CIV	125	Civil/Surveying Cad	3

Completion Requirements ..... 14 Credit Hours

Computer Engineering Technology

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.

COMPUTER ENGINEERING TECHNOLOGY- A40160

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra/Trigonometry I	3
MAT	122	Algebra/Trigonometry II	3
___	___	Humanities/Fine Arts Elective	3
___	___	Social/Behavioral Science Elective	3

Humanities/Fine Arts
(Select 3 credit hours from the following courses)

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

ECO	251	Prin. Of Microeconomics	3
HIS	111	World Civilization I	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

Major Courses

CIS	110	Introduction to Computers	3
CSC	133	C Programming	3
EGR	285	Design Project	2
ELC	131	DC/AC Circuit Analysis	5
ELN	131	Electronic Devices	4
ELN	133	Digital Electronics	4
ELN	232	Introduction to Microprocessors	4
ELN	233	Microprocessor Systems	4
NOS	110	Operating System Concepts	3
NOS	120	Linux/UNIX Single User	3
NOS	220	Linux/UNIX Administration	3
PHY	131	College Physics	4
COE	112	Co-op Work Experience I	2
CTS	220	Advanced Hardware/Software Support	3
CSC	134	C++ Programming	3
CET	111	Computer Upgrade/Repair I	3

Major Electives
Select 3 hours from the following courses

CET	193	Selected Topics	3
CSC	234	Advanced C++	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3

CSC	249	Data Struct & Algorithms	3
ELN	132	Linear IC Applications	4
ELN	136	Telecom Digital Systems	4
ELN	154	Intro to Data Comm	3
ELN	193	Selected Topics	3

Graduation Requirements ..... 74 Credit Hours

C LANGUAGE PROGRAMMING — C40160B

--Day and Evening

This certificate provides a solid programming foundation in C and C++, the primary programming languages used for Linux kernel, system, and utility code. Students may choose to substitute Java instead, with permission of the CET department head. Once a solid foundation is built with respect to the key elements of open source programs (i.e. threads, processes, dynamic libraries, and so on), the student will master some of the many tools that support the open source development community. Examples of such tools are CVS, SourceForge, Bugzilla, GNU tools, Eclipse, and scripting languages. The tools covered may evolve to keep pace with the fast changing open source landscape.

Upon completion, students should be able to participate in open source code development, whether contributing bug reports to existing SourceForge projects or sponsoring their own projects.

CIS	110	Introduction to Computers	3
CSC	133	C Programming	3
CSC	134	C++ Programming	3
CSC	234	Advanced C++	3

Completion Requirements .....12 Credit Hours

Computer Information Technology

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 program, designed to meet community information systems needs.

Course work includes computer systems terminology and operations, logic, operating systems, database, data communications/networking, and related business topics. Studies will provide experience for students to implement, support, and customize industry-standard information systems.
Graduates should qualify for a wide variety of computer-related, entry-level positions that provide opportunities for advancement with increasing experience and ongoing training. Duties may include systems maintenance and troubleshooting, support and training, and business applications design and implementation.

COMPUTER INFORMATION TECHNOLOGY - A25260

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
___	___	Humanities and Fine Arts Elective	3
___	___	Natural Sciences and Math Elective	3
___	___	Social/Behavioral Science Elective	3

Natural Sciences and Mathematics Elective
(Select 3.0 hours from the following courses)

MAT	115	Mathematical Models	3
MAT	140	Survey of Mathematics (w/Lab MAT 140A)	4
BIO	110	Principles of Biology	4
CHM	151	General Chemistry I	4
GEL	120	Physical Geology	4
PHY	151	College Physics I	4

Communication Elective
(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)

HUM	115	Critical Thinking	3
ART	111	Art Appreciation	3
DRA	111	Theater Appreciation	3
MUS	110	Music Appreciation	3
PHI	240	Introduction to Ethics	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3
ECO	151	Survey of Economics	3
ECO	251	Principles of Microeconomics	3
HIS	111	World Civilization I	3
POL	110	Introduction to Political Science	3

Major Courses

CIS	110	Introduction to Computers	3
CIS	115	Introduction to Programming and Logic	3
CTS	115	Information Systems Business Concept	3
CTS	118	IS Professional Comm	2
CTS	120	Hardware/Software Support	3
CTS	135	Integrated Software Introduction	4
CTS	155	Tech Support Functions	3
CTS	220	Advanced Hardware/Software Support	3
CTS	272	Desktop Support: Apps	3
CTS	285	Systems Analysis and Design	3
CTS	289	System Support Project	3
DBA	110	Database Concepts	3
NET	110	Data Communications/Networking	3
NOS	110	Operating Systems Concepts	3
NOS	130	Windows Single User	3
NOS	230	Windows Administration I	3
SEC	110	Security Concepts	3
ACA	220	Professional Transition	1

Major Electives List 1
Select 3 hours from the following courses

COE	113	Co-op Work Experience I	3
CCT	121	Computer Crimes Investigation	4
CTS	130	Spreadsheet	3
CTS	210	Computer Ethics	3
CTS	235	Integrated Software Advanced	4
CTS	240	Project Management	3
NET	125	Networking Basics	3
NOS	120	Linux/UNIX Single User	3
WEB	110	Internet/Web Fundamentals	3
HBI	110	Issues and Trends in HBI	3
HBI	250	Data Management and Utilization	3
OST	141	Med Terms I - Med Office	3

Major Electives List 2
Select 3 hours from the following courses

CCT	240	Data Recovery Techniques	3

CSC	139	Visual BASIC Programming	3
CTS	230	Advanced Spreadsheet	3
CTS	245	Integrated Apps Expert	3
CTS	292	Selected Topics in Tech Support Mgr	2
CTS	293	Selected Topics in Computer Info. Technology	3
DBA	115	Database Applications	3
NET	126	Routing Basics	3
NOS	220	Linux/UNIX Administration I	3
COE	122	Co-op Work Experience I	2
CTS	255	Advanced Tech Support Functions	3
CTS	288	Professional Practices in IT	3
HBI	113	Survey of Medical Insurance	3
OST	142	Med Terms II - Med Office	3
OST	149	Medical Legal Issues	3

Graduation Requirements ..... 73 Credit Hours

COMPUTER FORENSICS - C25260J

- Day and Evening

The Computer Forensics certificate is designed to provide students with advanced technical skills and knowledge related to retrieving and securing computer-related information for use in legal investigations.

CCT	221	Computer Crimes Investigation	4
CCT	240	Data Recovery Techniques	3
CTS	120	Hardware/Software Support	3
CTS	210	Computer Ethics	3
CTS	220	Advanced Hardware/Software Support	3

Graduation Requirements ..... 16 Credit Hours

HARDWARE TROUBLESHOOTING - C25260G

--Day and Evening

This certificate is designed for individuals interested in acquiring advanced technical skills and knowledge to maintain and repair personal computers. Students gain skills in buying parts, upgrading, building, and configuring personal computers. Major hands-on topics include documentation, troubleshooting techniques, PC architectures, disk drives and controller cards, memory management, add-on boards, and communications devices.

This certificate is designed to prepare the student for A+ certification. A program prerequisite of CIS 110 or CIS 111 is required.

CTS	120	Hardware/Software Support	3
CTS	220	Advanced Hardware/Software Support	3
NET	110	Networking Concepts	3
NOS	110	Operating System Concepts	3

Completion Requirements ..... 12 Credit Hours

HEALTHCARE INFORMATICS - C25260N

--Day, Evening, and Online

HBI	110	Issues and Trends in HBI	3
HBI	250	Data Management and Utilization	3
OST	141	Med Terms I - Med Office	3
HBI	113	Survey of Medical Insurance	3
OST	142	Med Terms II - Med Office	3
OST	149	Medical Legal Issues	3

Completion Requirements ..... 18 Credit Hours

IT FOUNDATIONS - C25260M

--Day, Evening, and Online

CIS	110	Introduction to Computers	3
CIS	115	Intro to Programming & Logic	3
NET	110	Networking Concepts	3
NOS	110	Operating System Concepts	3
SEC	110	Security Concepts	3
___	___	Major Elective	3

Major Electives

Select 3 hours from the following courses

CTS	115	Info Sys Business Concept	3
DBA	110	Database Concepts	3

Completion Requirements ..... 18 Credit Hours

IT SUPPORT MANAGEMENT - C25260L

–Day, Evening

This curriculum provides student with the knowledge and practical skills necessary to prepare them to supervise or manage a support technology team.

Graduates should qualify for employment opportunities that will lead to supervisory and management position in helpdesk support or with businesses, educational systems, and governmental agencies that rely on computer systems to manage information.

**Help Desk management position are not typically entry level positions and require at least 2 years experience as a support technician.

CTS	115	Information Systems Business Concepts	3
CTS	118	IS Professional Communication	2
CTS	240	Project Management	3
CTS	255	Advanced Tech Support Functions	3
CTS	285	Systems Analysis and Design	3
CTS	292	Selected Topics in CIT: Tech Support Manager	2

Completion Requirements ..... 16 Credit Hours

IT SUPPORT TECHNICIAN - C25260K

-Day and Evening

This certificate provides students with the knowledge and practical skills necessary to support users of computing technologies. The course work will help students prepare for the Microsoft Certified Tech Support (MCTS) certification and develop the ability to work in helpdesk and technical support positions.

CTS	155	Tech Support Functions	3
CTS	220	Advanced Hardware/Software Support	3
NOS	130	Windows Single User	3
NOS	230	Windows Admin I	3
CTS	272	Desktop Support: Apps	3

Completion Requirements ..... 15 Credit Hours

MICROSOFT APPLICATION SPECIALIST (MCAS) - C25260A

--Day and Evening

This certificate offers entry-level courses for individuals planning to use computers to process and manage information. Beginning with the basics, students acquire intermediate and advanced skills using a software package designed for word processing, spreadsheet presentations, and business presentations. A program prerequisite of CIS 110 or CIS 111 is required.

Upon completion, students should be able to integrate data to produce documents using multiple technologies. Students will also gain necessary skills to pursue the Microsoft Certified Application Specialist (MCAS) Proficient Level certification examinations in word processing, spreadsheet, as well as the Expert Level certification examination in presentation software.

CTS	118	IS Professional Comm	2
CTS	135	Integrated Software Introduction	4
CTS	235	Integrated Software Advanced	4

CTS 245 Integrated Apps Expert 3
Completion Requirements .....13 Credit Hours

OPEN SOURCE IT - C25260O

--Day, Evening, and Online

CIS 110 Introduction to Computers.....3
NOS 110 Operating Systems Concepts 3
CTS 135 Integrated Software Introduction 4
NOS 120 Linux/UNIX Single User 3
NOS 220 Linux/UNIX Administration I 3
Completion Requirements .....16 Credit Hours

SPREADSHEET SPECIALIST - C25260E

-Day and Evening
This certificate provides advanced-level courses for individuals who wish to acquire expert level spreadsheet skills. Topics include: creating professional looking spreadsheets, macro customization techniques, financial calculations, and utilizing advanced spreadsheet features.

Upon completion, students will gain necessary skills to pursue the Microsoft Certified Application Specialist (MCAS) certification examinations in Excel at the Core Level and the Expert Level.

CIS 110 Introduction to Computers.....3
CTS 130 Spreadsheet.....3
CTS 135 Integrated Software Introduction.....4
CTS 230 Advanced Spreadsheet.....3
Completion Requirements .....13 Credit Hours

Computer Programming

This curriculum prepares individuals for employment as computer programmers and related positions through study and applications in computer concepts, logic, programming procedures, languages, generators, operating systems, networking, data management, and business operations.

Students will solve business computer problems through programming techniques and procedures, using appropriate languages and software. The primary emphasis of the curriculum is hands-on training in programming and related computer areas that provide the ability to adapt as systems evolve.
Graduates should qualify for employment in business, industry, and government organizations as programmers, programmer trainees, programmer/analysts, software developers, computer operators, systems technicians, database specialists, computer specialists, software specialists, or information systems managers.

COMPUTER PROGRAMMING - A25130

General Education Courses
ENG 111 Expository Writing 3
___ ___ Communication Elective..... 3
___ ___ Humanities/Fine Arts Elective 3
___ ___ Math Elective..... 3
___ ___ Social/Behavioral Science Elective..... 3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)
ART 121 Design I..... 3
DRA 111 Theatre Appreciation..... 3
DRA 126 Storytelling 3
HUM 110 Technology and Society..... 3
HUM 115 Critical Thinking..... 3
HUM 160 Introduction to Film..... 3
HUM 230 Leadership Development..... 3
MUS 111 Fundamentals of Music..... 3

Mathematics Elective
(Select 3.0 hours from the following courses)
MAT 161 College Algebra..... 3
MAT 161A College Algebra Lab..... 1
MAT 171 Pre-Calculus Algebra 3
MAT 171A Pre-Calculus Algebra Lab..... 1
MAT 121 Algebra/Trigonometry..... 3

Communication Elective
(Select 3.0 hours from the following courses)
ENG 112 Argument-Based Research 3
ENG 113 Literature-Based Research..... 3
ENG 114 Prof. Research and Reporting 3
COM 120 Intro Interpersonal Communication..... 3
COM 231 Public Speaking 3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)
ECO 151 Survey of Economics..... 3
ECO 251 Prin. Of Microeconomics 3
PSY 118 Interpersonal Psychology 3
PSY 150 General Psychology 3
SOC 210 Introduction to Sociology 3
SOC 213 Sociology of the Family 3
SOC 220 Social Problems 3
HIS 111 World Civilizations I..... 3
HIS 121 Western Civilizations I..... 3
HIS 131 American History I..... 3
POL 110 Introduction Political Science..... 3

Major Courses
CIS 110 Introduction to Computers 3
CIS 115 Introduction to Programming and Logic.....3
CSC 134 C++ Programming 3
CSC 139 Visual BASIC Programming 3
CSC 151 JAVA Programming.....3
CSC 234 Advanced C++.....3
CSC 239 Advanced Visual BASIC.....3
CSC 251 Advanced JAVA Programming.....3
CSC 289 Programming Capstone Project 3
CTS 115 Information Systems Business Concepts.....3
CTS 285 Systems Analysis and Design 3
DBA 110 Database Concepts.....3
NET 110 Data Communications/Networking 3
NOS 110 Operating System Concepts 3
NOS 120 Linux/UNIX Single User.....3
SEC 110 Security Concepts 3

Major Electives List 1
Select 3 hours from the following courses
COE 113 Co-op Work Experience I 3
CSC 120 Computing Fundamentals I 4
CSC 141 Visual C++ Programming 3
CSC 152 SAS 4
CSC 153 C# Programming 3
DBA 120 Database Programming I 3
SGD 111 Introduction to SGD.....3
SGD 112 SGD Design.....4
SGD 113 SGD Programming.....3
WEB 115 Web Markup and Scripting 3
WEB 182 PHP Programming 3
WEB 183 Perl Programming.....3

Major Electives List 2
Select 3 hours from the following courses
CSC 130 Computing Fundamentals II 4
CSC 241 Advanced Visual C++ Programming 3
CSC 253 Advanced C# Programming 3
CSC 258 JAVA Enterprise Programming 3
DBA 115 Database Applications.....3
DBA 220 Oracle DB Programming II 3
DBA 221 SQL Server DB Programming II.....3

DBA	223	MySQL DB Programming II	3
SGD	114	3D Modeling	3
SGD	168	Mobile SG Programming	3
SGD	212	SGD Design II	3
SGD	213	SGD Programming II	3
WEB	125	Mobile Web Design	3

Major Electives List 3
Select 3 hours from the following courses

CSC	249	Data Structures and Algorithms	3
CSC	278	JAVA Message Service	3
CSC	291	Selected Topics in Computer Programming	1
CSC	292	Selected Topics in Computer Programming	2
CSC	296	Seminar in Computer Programming	1
CSC	297	Seminar in Computer Programming	2
DBA	260	Oracle DBMS Administration	3
DBA	261	SQL Server DBMS Administration	3
DBA	263	MySQL DBMS Administration	3
SGD	214	3D Modeling II	4
SGD	268	Mobile SG Programming II	3
WEB	180	Active Server Pages	3
WEB	186	XML Technology	3
WEB	187	Prog for Mobile Devices	3

Completion Requirements .....72 Credit Hours

JAVA PROGRAMMING - C25130A

-- Day and Evening
This certificate is designed for the student who wishes to acquire programming skills for Internet and Intranet application development. Students will learn to program Internet user interfaces, HTML, C++, JAVA, and other computer languages currently used for Internet and Intranet application and applet development.

DBA	110	Database Concepts	3
CSC	151	JAVA Programming	3
CSC	251	Advanced JAVA Programming	3
CSC	258	JAVA Enterprise Programs	3
CSC	278	JAVA Message Service	3

Completion Requirements .....15 Credit Hours

VISUAL BASIC PROGRAMMING - C25130B

--Day and Evening
Designed for individuals interested in acquiring the advanced programming skills necessary to design and implement Visual BASIC programs. The student will learn how to design Visual BASIC programs using event-driven programming techniques, implement current interface design standards, create reusable code, manipulate records in both a file-based system and a database system, and program customization using API calls. Emphasis is placed on proper program design techniques.

CSC	139	Visual BASIC Programming	3
CSC	239	Advanced Visual BASIC	3
CSC	292	Selected Topics in Computer Programming	2
DBA	110	Database Concepts	3
WEB	180	Active Server Pages	3

Completion Requirements .....14 Credit Hours

C++ PROGRAMMING - C25130C

--Day and Evening
The C++ Programming certificate offers courses for students interested in upgrading their programming skills by acquiring proficiency in an object-oriented programming language. This program is also appropriate for individuals who are new to programming. Instruction in C++ programming includes object-oriented programming topics (classes, inheritance, and polymorphism) as well as procedural programming topics (data types, control structures, functions, arrays, pointers and strings).

CSC	134	C++ Programming	3
CSC	141	Visual C++ Programming	3
CSC	234	Advanced C++	3
CSC	291	Selected Topics in Computer Programming	3
DBA	110	Database Concepts	3

Completion Requirements..... 13 Credit Hours

VISUAL C# PROGRAMMING - C25130D

–Day & Evening

CSC	153	C# Programming	3
CSC	253	Adv C# Programming	3
DBA	120	Database Programming I	3
DBA	221	SQL Server DB Prog II	3
WEB	180	Active Server Pages	3

Completion Requirements..... 15 Credit Hours

Database Management

The Database Management curriculum prepares graduates for employment with organizations that use database management system software to process, manage, and communicate information. Additionally, the curriculum provides the student with a foundation to begin professional certification with Microsoft or ORACLE database programs.

Course work includes terminology and design, database administration, backup and recovery, performance and tuning, database programming and tools, and related topics. Studies will provide an opportunity for students to implement, support, and manage industry standard database systems.

Graduates should qualify for a wide variety of database and computer related entry-level positions that provide opportunities for advancement with increasing experience and ongoing training.

DATABASE MANAGEMENT - A25150

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Math Elective	3
___	___	Social/Behavioral Science Elective	3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)

ART	121	Design I	3
DRA	111	Theatre Appreciation	3
DRA	126	Storytelling	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
HUM	230	Leadership Development	3
MUS	111	Fundamentals of Music	3
PHI	210	History of Philosophy	3
REL	110	World Religions	3

Mathematics Elective
(Select 3.0 hours from the following courses)

MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Pre-Calculus Algebra	3
MAT	171A	Pre-Calculus Algebra Lab	1
MAT	121	Algebra/Trigonometry	3

Communication Elective
(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

ECO	151	Survey of Economics	3
ECO	251	Prin. Of Microeconomics	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3
HIS	111	World Civilizations I	3
HIS	121	Western Civilizations I	3
HIS	131	American History I	3
POL	110	Introduction Political Science	3

Major Courses

CIS	110	Introduction to Computers	3
CIS	115	Introduction to Programming and Logic	3
CSC	139	Visual BASIC Programming	3
CSC	239	Advanced Visual BASIC Programming	3
CTS	115	Information Systems Business Concept	3
CTS	285	Systems Analysis and Design	3
DBA	110	Database Concepts	3
DBA	115	Database Applications	3
DBA	120	Database Programming I	3
DBA	210	Database Administration	3
DBA	230	Database in Corporate Environments	3
DBA	240	Database Analysis/Design	3
DBA	289	Database Project	3
NET	110	Networking Concepts	3
NOS	110	Operating System Concepts	3
SEC	110	Security Concepts	3

Major Electives List 1
Select 3 hours from the following courses

COE	113	Co-op Work Experience I	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3
DBA	220	Oracle Database Programming II	3
DBA	221	SQL Server Database Programming II	3
DBA	222	DB2 Database Programming II	3
DBA	223	MySQL Database Programming II	3
DBA	224	SAS Database Programming II	3
WEB	180	Active Server Pages	3
WEB	182	PHP Programming	3
WEB	183	Perl Programming	3

Major Electives List 2
Select 3 hours from the following courses

DBA	192	Selected Topic	2
DBA	260	Oracle DBMS Administration	3
DBA	261	SQL Server DBMS Administration	3
DBA	262	DB2 DBMS Administration	3
DBA	263	MySQL DBMS Administration	3
DBA	264	SAS DBMS Administration	3
NOS	130	Windows Single User	3
WEB	115	Web Markup and Scripting	3
WEB	140	Web Development Tools	3

Major Electives List 3
Select 3 hours from the following courses

DBA	193	Selected Topic	3
DBA	270	Oracle Performance Tuning	3
DBA	271	SQL Server Performance Tuning	3
DBA	273	MySQL Performance Tuning	3
DBA	285	Data Warehousing and Mining	3
DBA	291	Selected Topic	1
DBA	292	Selected Topic	2
DBA	293	Selected Topic	3
WEB	186	XML Technology	3
WEB	210	Web Design	3
WEB	250	Database Driven Websites	3

Graduation Requirements..... 72 Credit Hours

ORACLE DBA PROGRAMMING - C25150B

--Day and Evening
This certificate is designed for the student who wishes to acquire Oracle database theory, SQL programming, database administration fundamentals, and performance tuning techniques. Completion of CIS 115 or its equivalent is required before entering the program.

DBA	120	Database Programming I	3
DBA	193	Selected Topics in Database Management: Oracle Optimization	3
DBA	230	Database in Corporate Environments	3
DBA	240	Database Analysis/Design	3
DBA	260	Oracle DBMS Administration	3

Completion Requirements..... 15 Credit Hours

ORACLE DEVELOPER - C25150A

--Day and Evening
This certificate is designed for the student who wishes to acquire Oracle 9i database developer skills. Students will learn database theory and the logic necessary to build enterprise-class, scalable database applications. In addition, students will learn to construct sophisticated database forms and to develop logic skills in reports processing. Upon completion, students will be prepared to pursue certification examinations in Oracle Developer Associate and Oracle Developer Professional. Completion of CIS 115 or its equivalent is required before entering this program.

DBA	120	Database Programming I	3
DBA	192	Selected Topics in Database Management: Oracle Internet Application	2
DBA	220	Oracle DB Programming II	3
DBA	240	Database Analysis/Design	3
DBA	291	Selected Topics in Database Management: Oracle Project	1

Completion Requirements..... 12 Credit Hours

Electronics Engineering Technology

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.

ELECTRONICS ENGINEERING TECHNOLOGY - A40200

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra and Trigonometry	3
HUM	110	Technology and Society	3
___	___	Social/Behavioral Science Elective	3
___	___	Computer Elective	2

Computer Electives

Select 2 hours from the following courses

CIS	110	Introduction to Computers	3
CIS	111	Basic PC Literacy	2
NOS	110	Operating System Concepts	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

ECO	251	Prin. Of Microeconomics	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
HIS	121	Western Civilizations I	3

Major Courses

CSC	133	C Programming	3
EGR	131	Introduction to Electronics Technology	2
EGR	285	Design Project	2
ELC	128	Intro to PLC's	3
ELC	131	DC/AC Circuit Analysis	5
ELN	131	Semiconductor Applications	4
ELN	132	Linear IC Applications	4
ELN	133	Digital Electronics	4
ELN	154	Introduction to Data Communications	3
ELN	232	Introduction to Microprocessors	4
ELN	233	Microprocessor Systems	4
ELN	234	Communication Systems	4
ELN	275	Troubleshooting	2
MAT	122	Algebra/Trigonometry II	3
PHY	131	Physics-Mechanics	4
COE	112	Co-op Work Experience I	2

Major Electives

Select 3 hours from the following courses

ATR	211	Robot Programming	3
ATR	214	Advanced PLCs	4
ATR	215	Sensors and Transducers	3
ELN	193	Selected Topics: Electronics Engineering	3
ELN	231	Industrial Controls	3
ELN	235	Data Communication System	4
ELN	236	Fiber Optics and Lasers	4
MAT	223	Applied Calculus	3

Graduation Requirements ..... 73 Credit Hours

BASIC ELECTRONICS - C40200A

The Basic Electronics certificate provides the student with a program of study necessary for developing basic electronic skills. The student will gain an understanding of AC/DC basic circuits, digital circuits, and basic electronic devices. Courses are an adjunct of the Electronics Engineering Technology program and may be transferred directly toward completion of the A.A.S. degree in Electronics Engineering Technology.

Computer Electives

Select 2 hours from the following courses

CIS	110	Introduction to Computers	3
CIS	111	Basic PC Literacy	2
NOS	110	Operating System Concepts	3
___	___	Computer Elective	2
ELC	131	DC/AC Circuit Analysis	5
ELN	131	Electronics Devices	4
ELN	133	Digital Electronics	4
MAT	121	Algebra and Trigonometry	3

Completion Requirements ..... 18 Credit Hours

PLC Programming Certificate - C40200B

The PLC Programming Certificate provides the student with the basic technical skills and knowledge necessary to work with the Programmable Logic Controllers typically found in an industrial environment. The program investigates the operation and programming of PLCs and the interfacing of PLCs to electronic devices and sensors routinely found in industrial controls. Students entering the program are expected to have a basic knowledge of AC and DC electrical circuits.

ATR	214	Advanced PLCs	4
ATR	215	Sensors and Transducers	3
ELC	128	Intro to PLC's	3
ELN	231	Industrial Controls	3

Completion Requirements ..... 13 Credit Hours

Robotics - C40200C

The Robotics Certificate provides the student with the basic technical skills and knowledge necessary to work with PLCs and the types of industrial robots typically found in an automated production environment. The program investigates the operation and programming of several industrial robots from desktop trainers to SCARA and pick-and-place robots. Students entering the program are expected to have a basic knowledge of AC/DC electrical circuits.

ATR	211	Robot Programming	3
ATR	214	Advanced PLCs	4
CSC	133	C Programming	3
ELC	128	Intro to PLC's	3

Completion Requirement ..... 13 Credit Hours

Environmental Science Technology

The Environmental Science Technology curriculum is designed to prepare individuals for employment in environmental testing/consulting and related industries. Major emphasis is placed on biological and chemical evaluation of man's impact on his environment.

Course work includes general education, computer applications, biology, chemistry, industrial safety, and an extensive array of detailed environmentally specific classes.

Graduates should qualify for numerous positions within the industry. Employment opportunities include, but are not limited to, the following: Chemical Analysis, Biological Analysis, Water/Wastewater Treatment, EPA Compliance Inspection, Hazardous Material Handling, Waste Abatement/Removal, and Contaminated Site Assessment/Remediation.

ENVIRONMENTAL SCIENCE TECHNOLOGY - A20140

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra and Trigonometry	3
___	___	Humanities/Fine Arts Elective	3

___ ___ Social/Behavior Science Elective 3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)
HUM 110 Technology and Society 3
HUM 115 Critical Thinking 3
HUM 160 Introduction to Film 3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)
PSY 118 Interpersonal Psychology 3
SOC 210 Introduction to Sociology 3

Sustainability/Green Elective
(Choose 6 credit hours from the following)
CIV 110 Statics/Strength of Materials 4
CIV 111 Soils and Foundations 3
CIV 211 Hydraulics and Hydrology 3
ENV 193 Selected Topics in Environmental Science Tech 3
GIS 111 Introduction to GIS 3
GIS 112 Introduction to CPS 3

Environmental Assessment Elective
(Choose 6 credit hours from the following)
ENV 112 Env. Education I 3
ENV 114 Env. Education II 3
ENV 214 Water Quality 4
ENV 222 Air Quality 4
ENV 226 Environmental Law 3
ENV 228 Environmental Issues 1
ENV 232 Site Assessment and Remediation 3

Major Courses
BIO 110 Principles of Biology 4
CHM 131 Introduction to Chemistry 3
CHM 131A Introduction to Chemistry Lab 1
CHM 132 Organic and Biochemistry 4
ENV 110 Environmental Science 3
ENV 110A Environmental Science Lab 1
ENV 120 Earth Science 4
ENV 210 Management of Waste 4
ENV 212 Instrumentation 4
EGR 115 Introduction to Technology 3
ENV 218 Environmental Health 3
ENV 220 Applied Ecology 4
ISC 112 Industrial Safety 2
COE Requirement 6
Graduation Requirements ..... 73 Credit Hours

* Cooperative education (6 hours) or an equivalent is required during these terms. Students must have approval from the Dean and pre-register with the Co-op Office.

Industrial Engineering Technology

The industrial engineering technology curriculum prepares graduates to perform as technical leaders in manufacturing and service organizations. The curriculum incorporates the study and application of methods and techniques for developing, implementing and improving integrated systems involving people, material, equipment, information, and quality systems. The course work emphasizes analytical and problem solving techniques for process development and improvement.

The curriculum includes systems analysis, quality and productivity improvement techniques, cost analysis, facilities planning, organizational management, effective communications and computer usage as a problem-solving tool.

Graduates of the curriculum will qualify for positions in a wide range of manufacturing, quality and service organizations. Employment opportunities include industrial engineering technology, quality assurance, supervision, team leadership and facilities management. Certification is available through organizations such as ASQC, SME and APICS.

INDUSTRIAL ENGINEERING TECHNOLOGY - A40240

General Education Courses
ENG 111 Expository Writing 3
COE 112 Co-op Work Experience I 2
___ ___ Communication Elective 3
___ ___ Humanities/Fine Arts Elective 3
___ ___ Math Elective 6
___ ___ Social/Behavioral Science Elective 3
___ ___ Science Elective 3
___ ___ CAD Elective 4
___ ___ Manufacturing Elective 3
___ ___ Math/Science Elective 3

CAD Electives
(Select 4.0 hours from the following courses)
DFT 119 Basic CAD (Micro Station) 2
DFT 121 Intro to GD & T 2
DFT 153 CAD III 2
DFT 154 Intro Solid Modeling (ProE) 3
EGR 120 End and Design Graphics 2

Manufacturing Processing Electives
(Select 3 hours from the following courses)
MEC 161 Manufacturing Processes I 3
BPM 110 Biomanufacturing Practices 5

Humanities/Fine Arts
(Select 3.0 hours from the following courses)
HUM 110 Technology and Society 3
HUM 115 Critical Thinking 3
HUM 160 Introduction to Film 3
HUM 230 Leadership Development 3
ART 111 Art Appreciation 3
REL 110 World Religion 3
PHI 210 History of Philosophy 3
MUS 110 Music Appreciation 3

Mathematics Elective
(Select 3.0 hours from the following courses)
MAT 171 Pre-Calculus Algebra 3
MAT 171A Pre-Calculus Algebra Lab 1
MAT 121 Algebra/Trigonometry 3

Math/Science Elective
(Select 3.0 hours from the following courses)
MAT 122 Algebra/Trigonometry II 3
MAT 172 Precalculus Trigonometry 3
MAT 172A Precalculus Trig Lab 1
MAT 151 Statistics I 3
MAT 151A Statistics I Lab 1
CHM 131 Introduction to Chemistry 3
CHM 151 General Chemistry I 4
PHY 131 Physics - Mechanics 4
PHY 151 College Physics I 4

Communication Elective
(Select 3.0 hours from the following courses)
ENG 112 Argument-Based Research 3
ENG 113 Literature-Based Research 3
ENG 114 Prof. Research and Reporting 3

COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

ECO	151	Survey of Economics	3
ECO	251	Prin. Of Microeconomics	3
ECO	252	Prin. of Macroeconomics	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3
HIS	111	World Civilization I	3
POL	110	Intro to Political Science	3

Science Elective
(Select 6.0 hours form the following courses)

CHM	131	Introduction to Chemistry	3
CHM	151	General Chemistry I	4
PHY	131	Physics - Mechanics	4
PHY	151	College Physics 1	4

Major Courses

DFT	170	Engineering Graphics (Solid Works)	3
EGR	115	Introduction to Technology	3
EGR	285	Design Project	2
ISC	112	Industrial Safety	2
ISC	128	Industrial Leadership	2
ISC	132	Manufacturing Quality Control	3
ISC	136	Productivity Analysis I	3
ISC	243	Production and Operations Management I	3
ISC	255	Engineering Economy	3
MEC	180	Engineering Materials	3
DFT	110	Basic Drafting (AutoCAD)	2

Major Electives
(Select 9.0 hours from the following courses)

ISC	175	QA Fundamentals	1
ISC	237	Quality Management	3
ISC	277	Quality Technology	4
ISC	278	cGMP Quality Systems	2
ISC	280	Validation Fundamentals	2
ISC	192	Selected Topic: Green Technologies: Lean	2
PTC	222	Pharmaceutical Process Control	3

Completion Requirements ..... **68 Credit Hours**

ADVANCED QUALITY ASSURANCE - C40240C

The Advanced Quality Assurance Certificate provides the students with a progressive program that will support the development of advanced technical skills and knowledge necessary for success in the industrial/manufacturing environment.

ISC	132	Manufacturing Quality Control	3
ISC	237	Quality Management	3
ISC	277	Quality Technology	4
ISC	280	Validation Fundamentals	2

Completion Requirements ..... **12 Credit Hours**

INDUSTRIAL MANAGEMENT - C40240A

-Evening Only

The Industrial Management certificate provides the student with a progressive study program that will support the development of basic technical skills and knowledge necessary for success in the industrial/manufacturing environment. There are no prerequisites required for entering this certificate program. The course requirements are self-contained for providing the necessary basic math and manufacturing processes introduction.

ISC	112	Industrial Safety	2
ISC	128	Industrial Leadership	2
ISC	243	Production and Operations Management I	3
ISC	255	Engineering Economy	3
ISC	132	Manufacturing Quality Control	3

Completion Requirements ..... **13 Credit Hours**

MANUFACTURING PROCESS CONTROL - C40240D

The Manufacturing Process Control Certificate provides the student with a progressive program that will support a basic understanding of quality and process control in an industrial/manufacturing environment.

Manufacturing Processing Electives
(Select 3 hours from the following courses)

MEC	161	Manufacturing Processes I	3
BPM	110	Biomanufacturing Practices	5

Major Courses

ISC	112	Industrial Safety	2
ISC	136	Productivity Analysis	3
ISC	278	cGMP Quality Systems	2
PTC	222	Pharmaceutical Process Control	3
___	___	Manufacturing Elective	3

Completion Requirements ..... **13 Credit Hours**

QUALITY ASSURANCE - C40240B

The Quality Assurance Certificate provides the student with a progressive program that will support the development of basic technical skills and knowledge necessary for success in the industrial/manufacturing environment.

DFT	110	Basic Drafting (AutoCAD)	2
DFT	121	Introduction to GD and T	2
ISC	132	Manufacturing Quality Control	3
ISC	175	QA Fundamentals	1
ISC	278	cGMP Quality System	2
EGR	115	Introduction to Technology	3

Completion Requirements ..... **13 Credit Hours**

Information Systems Security

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.

INFORMATION SYSTEMS SECURITY - A25270

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Math Elective	3

___ ___ Social/Behavioral Science Elective 3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)
HUM 110 Technology and Society 3
HUM 115 Critical Thinking 3
HUM 160 Introduction to Film 3
HUM 230 Leadership Development 3

Mathematics Elective
(Select 3.0 hours from the following courses)
MAT 145 Analytical Math 3
MAT 145A Analytical Math Lab 1
MAT 161 College Algebra 3
MAT 161A College Algebra Lab 1
MAT 171 Pre-Calculus Algebra 3
MAT 171A Pre-Calculus Algebra Lab 1
MAT 121 Algebra/Trigonometry 3

Communication Elective
(Select 3.0 hours from the following courses)
ENG 112 Argument-Based Research 3
ENG 113 Literature-Based Research 3
ENG 114 Prof. Research and Reporting 3
COM 120 Intro Interpersonal Communication 3
COM 231 Public Speaking 3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)
ECO 151 Survey of Economics 3
ECO 251 Prin. Of Microeconomics 3
PSY 118 Interpersonal Psychology 3
PSY 150 General Psychology 3
SOC 210 Introduction to Sociology 3
SOC 213 Sociology of the Family 3
SOC 220 Social Problems 3

Major Courses
CIS 110 Introduction to Computers 3
CIS 115 Introduction to Programming and Logic 3
CTS 115 Information Systems Business Concepts 3
DBA 110 Database Concepts 3
NET 125 Networking Basics 3
NET 126 Routing Basics 3
NOS 110 Operating System Concepts 3
NOS 120 Linux/UNIX Single User 3
NOS 130 Windows Single User 3
NOS 220 Linux/UNIX Administration I 3
NOS 230 Windows Administration I 3
SEC 110 Security Concepts 3
SEC 150 Secure Communications 3
SEC 160 Secure Administration I 3
SEC 210 Intrusion Detection 3
SEC 220 Defense-In-Depth 3
SEC 289 Security Capstone Project 3

Major Electives List 1
Select 3 hours from the following courses
COE 113 Co-op Work Experience I 3
NET 225 Routing and Switching I 3
NOS 231 Windows Administration II 3
CCT 121 Computer Crimes Investigation 3

Major Electives List 2
Select 3 hours from the following courses
COE 123 Co-op Experience II 3
NET 226 Routing and Switching II 3
NOS 221 Linux/UNIX Administration II 3
NOS 232 Windows Administration III 3
CCT 240 Data Recovery Techniques 3
Graduation Requirements ..... 72 Credit Hours

NETWORK SECURITY ADMINISTRATOR - C25270A

– Day and Evening

SEC 110 Security Concepts 3
SEC 150 Secure Communications 3
SEC 160 Secure Administration I 3
SEC 210 Intrusion Detection 3
SEC 220 Defense-in-Depth 3
Completion Requirements ..... 15 Credit Hours

Interior Design

The Interior Design curriculum is designed to prepare students for a variety of job opportunities in the field of both residential and non-residential interior design. The focus of the studies is technical knowledge, professional practices, and aesthetic principles.

Students receive instruction in basic design, graphic presentation, construction document preparation, materials and methods, environmental and structural systems, building codes and specifications, computer-aided design, history of interiors and furnishings, color theory, products, business practices, and general education courses.

Upon completion, graduates have career opportunities in residential or commercial interior design, architecture, set design, showroom design, furniture/textiles/accessories sales, and any business dealing with interiors.

INTERIOR DESIGN - A30220

General Education Courses
ENG 111 Expository Writing 3
ENG 114 Professional Research and Reporting 3
MAT 121 Algebra and Trigonometry 3
___ ___ Humanities/Fine Arts Elective 3
___ ___ Social/Behavioral Science Elective 3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)
PSY 118 Interpersonal Psychology 3
PSY 150 General Psychology 3
SOC 210 Introduction to Sociology 3
SOC 220 Social Problems 3
ECO 151 Survey of Economics 3
ECO 251 Principles of Microeconomics 3
HIS 121 Western Civilization I 3
HIS 122 Western Civilization II 3
POL 110 Introduction to Political Science 3
POL 130 State & Local Government 3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)
ART 111 Art Appreciation 3
ART 114 Art History Survey I 3
DRA 111 Theatre Appreciation 3
HUM 110 Technology and Society 3
HUM 115 Critical Thinking 3
HUM 160 Introduction to Film 3
MUS 110 Music Appreciation 3
PHI 210 History of Philosophy 3
REL 110 World Religions 3

Major Courses
ARC 111 Introduction to Architectural Technology 3
ARC 112 Construction Materials and Methods 4
ARC 114 Architectural CAD 2
ARC 114A Architectural CAD Lab 1

ARC	131	Building Codes	3
ARC	230	Environmental Systems	4
DES	125	Graphic Presentation I	2
DES	135	Principles & Elements of Design	4
DES	220	Principles of Interior Design	3
DES	255	History of Interior & Furnishings I	3
DES	230	Residential Deign I	3
DES	235	Products	3
DES	240	Commercial and Contract Design	3
DES	210	Business Practices for Interior Design	2
DES	265	Lighting and Interior Design	2
DES	286	Interior Design/Advanced	3
DES	225	Textiles and Fabrics	3
COE	112	Co-op Work Experience I	2

Major Electives

Select 7 hours from the following courses

ARC	212	Commercial Construction Technology	3
ARC	220	Advanced Architectural CAD	2
ARC	221	Architectural 3-D CAD	3
ARC	261	Solar Technology	2
ARC	293	Selected Topics	3
ARC	235	Architectural Portfolio	3
ARC	264	Digital Architecture	2

Graduation Requirements ..... 72 Credit Hours

Landscape Architecture Technology

The Landscape Architecture Technology curriculum prepares individuals as landscape architecture technicians in landscape design, construction, and architecture fields. The well-trained landscape technician will find excellent prospects for employment and advancement, including large-scale site design and supervision and residential landscape design.

Students receive instruction in landscape construction materials and methods, environmental planning, principles of horticulture, building codes, and computer applications. They develop drafting and computer skills through progressive hands-on courses. Students may choose from a library of courses to suit specific interest areas.

Graduates will demonstrate a working knowledge of landscape architectural practices, including site planning, storm water engineering, road and parking layouts, and grading and plant selection according to zoning/code requirements.

LANDSCAPE ARCHITECTURE TECHNOLOGY - A40260

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	121	Algebra and Trigonometry	3
___	___	Humanities/Fine Arts Elective	3
___	___	Social/Behavioral Science Elective	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	220	Social Problems	3
ECO	151	Survey of Economics	3
ECO	251	Principles of Microeconomics	3
HIS	121	Western Civilization I	3
HIS	122	Western Civilization II	3
POL	110	Introduction to Political Science	3
POL	130	State & Local Government	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

ART	114	Art History Survey I	3
DRA	111	Theatre Appreciation	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
MUS	110	Music Appreciation	3
PHI	210	History of Philosophy	3
REL	110	World Religions	3

Major Courses

ARC	114	Architectural CAD	2
ARC	114A	Architectural CAD Lab	1
ARC	240	Site Planning	3
ARC	264	Digital Architecture	2
CIV	125	Civil/ Surveying CAD	3
COE	112	Co-op Work Experience I	2
COE	121	Co-op Work Experience I	1
ENV	110	Environmental Science	3
LAR	111	Intro to Landscape Architectural Tech	3
LAR	112	Landscape Materials and Methods	4
LAR	113	Residential Landscape Design	3
LAR	211	Landscape Construction and Design	3
LAR	223	Landscape Design Project	4
LAR	230	Principles of Horticulture I	4
LAR	231	Principles of Horticulture II	3
LAR	250	Survey of Landscape Architecture	3

Major Electives

Select 8 hours from the following courses

ARC	220	Advanced Architectural CAD	2
ARC	221	Architectural 3-D CAD	3
ARC	241	Contract Administration	2
ARC	235	Architectural Portfolio	3
ENV	220	Applied Ecology	4
LAR	120	Sustainable Development	3
LAR	193	Selected Topics in Landscape Architecture	3
LAR	235	LAR Presentation Techniques	3
LAR	241	Advanced Site Planning	3
LAR	242	Planning and Environment	3
SRV	110	Surveying I	4

Graduation Requirements ..... 67 Credit Hours

LANDSCAPE ARCHITECTURE - C40260A

ARC	114	Architecture CAD	2
LAR	111	Introduction to Landscape Architecture Technology	3
LAR	112	Landscape Materials and Methods	4
LAR	113	Residential Landscape Design	3
LAR	230	Principles of Horticulture I	4

Completion Requirements ..... 16 Credit Hours

Mechanical Engineering Technology

The Mechanical Engineering Technology curriculum provides a board and diverse educational experience. Course work includes computer-aided drafting and design, applied mechanics, materials engineering, quality control, manufacturing methods and processes, computer usage, mathematics, physics and oral and written communications. The courses will stress critical thinking, planning and problem solving.

The diversity of Mechanical Engineering Technology degree enables students to pursue exciting careers in following fields:

- Engineering/Architectural
- Mechanical Design
- Manufacturing

- Quality
- Service

If elected, students can pursue a 4 year Engineering Technology degree after graduation.

MECHANICAL ENGINEERING TECHNOLOGY - A40320

General Education Courses

ENG	111	Expository Writing	3
COE	112	Co-op Work Experience I	2
___	___	Communication Elective	3
___	___	Humanities Elective	3
___	___	Math Elective	3
___	___	Social/Behavioral Science Elective	3
___	___	Science Elective	3
___	___	CAD Elective	9
___	___	Math/Science Elective	3

CAD Electives

(Select 9.0 hours from the following courses)

DFT	119	Basic CAD	2
DFT	121	Intro to GD & T	2
DFT	154	Intro Solid Modeling (ProE)	3
EGR	120	End and Design Graphics	3
ARC	221	Architectural 3D CAD	3
ARC	114	Architectural CAD	2

Humanities/Fine Arts

(Select 3.0 hours from the following courses)

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
HUM	230	Leadership Development	3
MUS	110	Music Appreciation	3
PHI	210	History of Philosophy	3
REL	110	World Religions	3
ART	111	Art Appreciation	3

Mathematics Elective

(Select 3.0 hours from the following courses)

MAT	171	Pre-Calculus Algebra	3
MAT	171A	Pre-Calculus Algebra Lab	1
MAT	121	Algebra/Trigonometry	3

Math/Science Elective

(Select 3.0 hours from the following courses)

MAT	122	Algebra/Trigonometry II	3
MAT	172	Precalculus Trigonometry	3
MAT	172A	Precalculus Trig Lab	1
MAT	151	Statistics I	3
MAT	151A	Statistics I Lab	1
CHM	131	Introduction to Chemistry	3
CHM	151	General Chemistry I	4

Communication Elective

(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

ECO	151	Survey of Economics	3
ECO	251	Prin. Of Microeconomics	3
ECO	252	Prin. Of Macroeconomics	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3
HIS	111	World Civilization I	3
POL	110	Intro to Political Science	3

Science Elective

(Select 3.0 hours form the following courses)

PHY	131	Physics – Mechanics	4
PHY	151	College Physics 1	4

Major Courses

CIV	110	Statics/Strength of Materials	4
DFT	110	Basic Drafting (AutoCAD)	2
DFT	170	Engineering Graphics	3
EGR	115	Intro to Technology	3
EGR	285	Design Project	2
ISC	132	Manufacturing Quality Control	3
ISC	255	Engineering Economy	3
MEC	161	Manufacturing Processes I	3
MEC	180	Engineering Materials	3
MEC	265	Fluid Mechanics	3

Major Elective

(Select 8.0 hours from the following courses)

ELC	131	DC/AC Curcuit Analysis	5
MEC	193	Selected Topic: Green Technologies: Design	3
MEC	267	Thermal Systems	3
ISC	128	Industrial Leadership	2
MEC	130	Mechanisms	3

Graduation Requirements ..... 67 Credit Hours

ENGINEERING FUNDAMENTALS- C40320F

The Engineering Fundamentals Certificate is a refresher in major engineering disciplines to possibly sit for the Engineering Fundamental Exam.

CIV	110	Statics/Strength of Materials	4
MEC	180	Engineering Materials	3
MEC	265	Fluid Mechanics	3
MEC	267	Thermal Systems	3
ISC	255	Engineering Economy	3

Completion Requirements ..... 16 Credit Hours

ENGINEERING MANAGEMENT- C40320E

The Engineering Management Certificate will help students understand management tools in engineering.

DFT	110	Basic Drafting (AutoCAD)	2
ISC	128	Industrial Leadership	2
ISC	132	Manufacturing Quality Control	3
ISC	255	Engineering Economy	3
EGR	115	Intro to Technology	3

Completion Requirements ..... 13 Credit Hours

MATERIALS ENGINEERING- C40320D

The Materials Engineering Certificate will provide students with an understanding of engineering materials and processes.

DFT	110	Basic Drafting (AutoCAD)	2
DFT	170	Engineering Graphics	3
MEC	130	Mechanisms	3
MEC	180	Engineering Materials	3
MEC	161	Manufacturing Processes I	3

Completion Requirements ..... 14 Credit Hours

MECHANICAL DESIGN - C40320B

Study of design elements for CAD users.

CAD Electives

Select 2 hours from the following courses

DFT	119	Basic CAD (Micro Station)	2
DFT	189	Emerging Tech is CAD	2
EGR	120	Eng and Design Graphics	2

Major Courses

DFT	110	Basic Drafting [h] (AutoCAD)	2
DFT	154	Intro Solid Modeling (ProE)	3
DFT	170	Engineering Graphics (SolidWorks)	3
MEC	180	Engineering Materials	3
___	___	CAD Elective	2

Completion Requirements .....13 Credit Hours

THERMAL MECHANICS - C40320C

The Thermal Mechanics Certificate provides a refresher or a concentration in thermal sciences.

DFT	170	Engineering Graphics	3
MEC	180	Engineering Materials	3
MEC	265	Fluid Mechanics	3
MEC	267	Thermal Systems	3

Completion Requirements .....12 Credit Hours

Networking Technology

The Networking Technology curriculum prepares individuals for employment supporting local- and wide-area networks. Students will learn how to use technologies to provide for data, voice, image, and video communications in business, industry, and education.

Course work includes design, installation, configuration, and management of local- and wide-area network hardware and software. Emphasis is placed on developing proficiency in the use of network management software and the use of hardware such as bridges 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 products, depending on their local program.

NETWORKING TECHNOLOGY - A25340

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Math Elective	3
___	___	Social/Behavioral Science Elective	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
HUM	230	Leadership Development	3

Mathematics Elective

(Select 3.0 hours from the following courses)

MAT	145	Analytical Math	3
MAT	145A	Analytical Math Lab	1
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Pre-Calculus Algebra	3
MAT	171A	Pre-Calculus Algebra Lab	1
MAT	121	Algebra/Trigonometry	3

Communication Elective

(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

ECO	251	Prin. Of Microeconomics	3
ECO	151	Survey of Economics	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3

Major Courses

CIS	110	Introduction to Computers	3
CIS	115	Introduction to Programming and Logic	3
CTS	115	Information Systems Business Concepts	3
CTS	120	Hardware/Software Support	3
DBA	110	Database Concepts	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NET	225	Routing and Switching I	3
NET	226	Routing and Switching II	3
NET	240	Network Design	3
NOS	110	Operating Systems Concepts	3
NOS	120	Linux/UNIX Single User	3
NOS	130	Windows Single User	3
NOS	230	Windows Administration I	3
SEC	110	Security Concepts	3

Concentration Electives List

Select one of the following complete sets of courses

MCSA Option

NOS	231	Windows Administration II	3
NOS	232	Windows Administration III	3
NET	198	Windows Administration V	3
NOS	220	Linux/Unix Admin I	3
		OR	
SEC	160	Security Admin I	3
		OR	
COE	113	Co-op Work Experience	3

CCNP Option

NET	270	Building Scalable Networks	3
NET	272	Multi-Layer Networks	3
NET	273	Internetworking Support	3
NOS	220	Linux/Unix Admin I	3
		OR	
SEC	160	Security Admin I	3
		OR	
COE	113	Co-op Work Experience	3

RHCE Option

NOS	220	Linux/UNIX Administration I	3
NOS	221	Linux/UNIX Administration II	3
NOS	222	Linux/UNIX Administration III	3
SEC	160	Secure Admin I	3
		OR	
COE	113	Co-op Work Experience	3

Graduation Requirements .....72 Credit Hours

CISCO CERTIFIED NETWORK ASSOCIATE (CCNA) - C25340C

This certificate is designed to prepare students for the CISCO Certified Network Associate (CCNA) examination. Topics include network topologies and design, router configuration and protocols, switching theory, virtual LANS and threaded case studies.

Upon completion of the four-course sequence, students will have the expertise they need to pass the test required to achieve CCNA status. Completion of NET 110 or CIS 282 or its equivalent is required to begin this program.

NET	125	Routing and Switching I	3
NET	126	Routing and Switching II	3
NET	225	Advanced Router and Switching I	3
NET	226	Advanced Router and Switching II	3

Completion Requirements .....12 Credit Hours

CISCO CERTIFIED NETWORK PROFESSIONAL (CCNP) - C25340I

The CISCO Certified Network Professional (CCNP) certificate provides the student with advanced skills in LAN/WAN networking technologies with an emphasis on CISCO methodology. These courses will provide an in-depth study of theory, as well as practical hands-on lab activities to prepare the student for the CCNP certification objectives. Topics include routing protocols, switching technology, remote access setup and maintenance, building multi-layer networks, and networking troubleshooting.

NET	270	Building Scalable Networks	3
NET	272	Multi-Layer Networks	3
NET	273	Internetworking Support	3
NOS	220	Linux/Unix Admin I	3
		OR	
SEC	160	Security Admin I	3

Completion Requirements .....12 Credit Hours

LINUX/RED HAT ADMINISTRATION - C25340K

- Day and Evening

This certificate is designed to prepare students for the Red Hat Certified Engineer (RHCE) examination. Topics include network installation, Red Hat Linux file system and kernel concepts, scripts, system recovery, cron system, LILO configuration, implement configure, log and restrict various Red Hat network services, configuration issues associated with using Red Hat Linux as a router, basic firewall policies, and basics of the XWindow system. Completion of NOS 110 is required to begin this program.

NOS	120	Linux/UNIX Single User	3
NOS	220	Linux/UNIX Administration I	3
NOS	221	Linux/UNIX Administration II	3
NOS	222	Linux/UNIX Administration III	3

Completion Requirements .....12 Credit Hours

MICROSOFT CERTIFIED SYSTEMS ADMINISTRATOR (MCSA) - C25340J

NET	198	Windows Administration IV	3
NOS	130	Windows Single User	3
NOS	230	Windows Administration I	3
NOS	231	Windows Administration II	3
NOS	232	Windows Administration III	3

Completion Requirements .....15 Credit Hours

Simulation & Game Development

The Simulation and Game Development curriculum provides a broad background in simulation and game development with practical applications in creative arts, visual arts, audio/video technology, creative writing, modeling, design, programming and management.
Students will receive hands-on training in design, 3D modeling, software engineering, database administration and programming for the purpose of creating simulations and games.
Graduates should qualify for employment as designers, artists, animators, programmers, database administrators, testers, quality assurance analysts, engineers and administrators in the entertainment industry, the health care industry, engineering, forensics, education, NASA and government agencies.

SIMULATION AND GAME DEVELOPMENT - A25450

General Education Courses
Required Courses

ACA	111	College Student Success	1
ENG	111	Expository Writing	3
___	___	Communications Elective	3
___	___	Social/Behavioral Science Elective	3
___	___	Math Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Physical Science Elective	3

Math Elective
(Select 3.0 hours from the following courses)

MAT	121	Algebra/Trigonometry I	3
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Precalculus Algebra	3
MAT	171A	Precalculus Algebra Lab	1

Physical Science Elective
(Select 3.0 hours from the following courses)

PHY	131	Physics-Mechanics	4
PHY	151	College Physics I	4
BIO	165	Anatomy and Physiology I	4
SGD	115	Physically-Based Modeling	3
SGD	166	SG Physiology/Kinesis	3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)

ART	113	Art Methods and Materials	3
ART	121	Design I	3
ART	281	Sculpture I	3
DRA	126	Storytelling	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	130	Myth in Human Culture	3
HUM	160	Introduction to Film	3
HUM	230	Leadership Development	3
MUS	111	Fundamentals of Music	3

Communication Elective
(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

ECO	151	Survey of Economics	3
ECO	251	Prin. Of Microeconomics	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	220	Social Problems	3
HIS	111	World Civilizations I	3
HIS	121	Western Civilizations I	3
HIS	131	American History I	3
POL	110	Introduction Political Science	3

Major Courses

SGD	111	Intro. To SGD	3
SGD	112	SGD Design	3
SGD	114	3D Modeling	3
SGD	116	Graphic Design Tools	3
SGD	134	SGD Quality Assurance	3
SGD	158	SGD Business Management I	3
SGD	163	SG Documentation	3
SGD	164	SG Audio/Video	3
SGD	174	SG Level Design	3
SGD	212	SGD Design II	3
SGD	289	SGD Project	3

Major Options
(Students must select 1 group below, all course in the selected group must be completed in order listed)

Option A – Game Programming

CIS	115	Intro to Prog & Logic	3
CSC	134	C++ Programming	3
CSC	234	Adv C++ Programming	3
SGD	171	Flash SG Programming	3
SGD	285	SG Software Engineering	3

Option B – Game Programming

CIS	115	Intro to Prog & Logic	3
CSC	151	JAVA Programming	3
CSC	251	Adv JAVA Programming	3
SGD	171	Flash SG Programming	3
SGD	285	SG Software Engineering	3

Option C – Game Design & 3D Modeling

SGD	117	Art for Games	3
SGD	113	SGD Programming	3
SGD	214	3D Modeling II	3
SGD	162	SD 3D Animation	3
SGD	165	SG Character Development	3

Major Electives List I
(Select 2.0 hours from the following courses)

COE	113	Co-op Work Experience I	3
DBA	110	Database Concepts	3
SGD	124	MMO Programming	3
SGD	181	Machinima	3
SGD	237	Rigging 3D Models	3
SGD	244	3D Modeling III	3
SGD	271	Adv Flash Programming	3
SGD	274	SG Level Design II	3
SGD	167	SG Ethics	3
SGD	168	Mobile SG Programming	3
SGD	213	SGD Programming II	3

Major Electives List II
(Select 3.0 hours from the following courses)

SGD	125	SG Artificial Intelling	3
SGD	135	Serious Games	3
SGD	159	SGD Production Management	3
SGD	215	Adv Phys-Based Modeling	3
SGD	232	Survey of Game Engines	3
SGD	292	Selected Topics	2
SGD	170	Handheld SG Programming	3
SGD	268	Mobile SG Programming II	3
SGD	293	Selected Topic	3

Graduation Requirements..... 72 Credit Hours

GAME PROGRAMMING AND DESIGN - D25450A

This diploma is designed for individuals seeking employment in the digital game, movie industry, or related companies, as game programmers, programmer trainees, game testers or designers/developers.

Topics include the study of applications in game engines, logic, graphics, game programming API's, game design implementation techniques. Primary emphasis is hands-on training in digital game design/programming that provides a student the ability to adapt as digital game technology evolves. Upon completion, students will have the necessary skills to develop computer games using appropriate tools.

General Education Courses

ENG	111	Expository Writing	3
___	___	Math Elective	3

Math Elective
(Select 3.0 hours from the following courses)

MAT	121	Algebra/Trigonometry I	3
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Precalculus Algebra	3
MAT	171A	Precalculus Algebra Lab	1

Major Courses

CIS	115	Intro to Prog & Logic	3
CSC	134	C++ Programming	3
CSC	234	Adv C++ Programming	3
SGD	171	Flash SG Programming	3
SGD	116	Graphic Design Tools	3
SGD	115	Phys-Based Modeling	3
SGD	111	Introduction to Simulation and Game Development	3
SGD	112	SGD Design	3
SGD	114	3D Modeling	3
SGD	174	SG Level Design	3
SGD	212	SGD Design II	3
SGD	285	Software Engineering	3

Major Electives List I
(Select 3.0 hours from the following courses)

COE	113	Co-op Work Experience I	3
DBA	110	Database Concepts	3
SGD	124	MMO Programming	3
SGD	125	SG Artificial Intelling	3
SGD	135	Serious Games	3
SGD	213	SGD Programming II	3
SGD	215	Adv Phys-Based Modeling	3
SGD	232	Survey of Game Engines	3
SGD	271	Adv Flash Programming	3
SGD	168	Mobile SG Programming	3
SGD	170	Handheld SG Programming	3

Graduation Requirements..... 45 Credit Hours

MODELING AND ANIMATION - D25450B

General Education Courses

ENG	111	Expository Writing	3
___	___	Math Elective	3

Math Elective
(Select 3.0 hours from the following courses)

MAT	121	Algebra/Trigonometry I	3
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Precalculus Algebra	3
MAT	171A	Precalculus Algebra Lab	1

Major Courses

SGD	111	Introduction to Simulation and Game Development	3
SGD	112	SGD Design	3
SGD	114	3D Modeling	3
SGD	162	SG 3D Animation	3
SGD	166	SG Physiology/Kinesis	3
SGD	212	SGD Design II	3
SGD	214	3D Modeling II	3
SGD	164	SG Audio/Video	3
SGD	165	SG Character Development	3
SGD	292	SG Selected Topics	2
SGD	116	Graphic Design Tools	3
SGD	174	SG Level Design	3
SGD	117	Art for Games	3

Major Electives List I
(Select 3.0 hours from the following courses)

COE	113	Co-op Work Experience I	3
SGD	181	Machinima	3
SGD	271	SG Level Design II	3
SGD	237	Rigging 3D Models	3
SGD	244	3D Modeling III	3

Graduation Requirements ..... 48 Credit Hours

MODELING AND ANIMATION - C25450A

SGD	111	Introduction to SGD	3
SGD	114	3D Modeling	3
SGD	165	SG Character Development	3
SGD	214	3D Modeling II	3
SGD	162	SG 3D Animation	3

Completion Requirements ..... 15 Credit Hours

PRODUCTION - C25450B

SGD	111	Introduction to SGD	3
SGD	112	SGD Design	3
SGD	158	SGD Business Management	3
SGD	159	SGD Production Management	3
SGD	163	SG Documentation	3
SGD	212	SGD Design II	3

Completion Requirements ..... 18 Credit Hours

Surveying Technology

The Surveying Technology curriculum provides training for technicians in the many areas of surveying. Surveyors are involved in land surveying, route surveying, construction surveying, photogrammetry, mapping, global positioning systems, geographical information systems, and other areas of property description and measurements.

Course work includes the communication and computational skills required for boundary, construction, route, and control surveying, photogrammetry, topography, drainage, surveying law, and subdivision design, with emphasis upon applications of electronic data collection and related software including CAD.

Graduates should qualify for jobs as survey party chief, instrument person, surveying technician, highway surveyor, mapper, GPS technician, and CAD operator. Graduates will be prepared to pursue the requirements necessary to become a Registered Land Surveyor in North Carolina.

SURVEYING TECHNOLOGY - A40380

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
MAT	121	Algebra and Trigonometry	3
___	___	Humanities/Fine Arts Elective	3
___	___	Social/Behavioral Science Elective	3

Communication Elective
(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
ART	111	Art Appreciation	3
REL	110	World Religion	3
DRA	111	Theater Appreciation	3
MUS	110	Music Appreciation	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

ANT	210	General Anthropology	3
ECO	151	Survey of Economics	3
ECO	251	Principles of Microeconomics	3
GEO	110	Introduction to Geography	3
GEO	111	World Regional Geography	3
HIS	111	World Civilization I	3
HIS	121	Western Civilization I	3
HIS	131	American History I	3
POL	110	Introduction to Political Science	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3

Major Electives
(Choose 13 credit hours from the following)

GIS	112	Introduction to GPS	3
SRV	250	Advanced Surveying	3
SRV	260	Field and Office Practices	3
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	2
DFT	119	Basic CAD	2
GIS	120	Introduction to Geodesy	3
MAT	122	Algebra/Trigonometry II	3
CIV	230	Construction Estimating	3
CIV	240	Project Management	3
CIV	215	Highway Technology	2

Set Electives
(Choose 1 set for 10 credit hours from the following)

Set I

CIV	211	Hydraulics and Hydrology	3
CIV	111	Solis and Foundations	3
CIV	110	Statics/Strength of Materials	4

Set II

SRV	211	Introduction to Hydrology	3
SRV	220	Surveying Law	3
SRV	240	Topo/Site Surveying	4

Major Courses

DFT	110	Basic Drafting (AutoCAD)	2
EGR	115	Introduction to Technology	3
GIS	111	Introduction to GIS	3
SRV	110	Surveying I	4
SRV	111	Surveying II	4
SRV	210	Surveying III	4
SRV	220	Surveying Law	3
SRV	230	Subdivision Planning	3
CIV	125	Civil/Surveying CAD	3

Graduation Requirements ..... 64 Credit Hours

Web Technologies

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.

WEB TECHNOLOGIES - A25290

General Education Courses

ENG	111	Expository Writing	3
___	___	Communication Elective	3
___	___	Math Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Social/Behavioral Science Elective	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
DRA	111	Theatre Appreciation	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
HUM	160	Introduction to Film	3
HUM	230	Leadership Development	3
MUS	110	Music Appreciation	3
MUS	111	Fundamentals of Music	3
PHI	210	History of Philosophy	3
REL	110	World Religions	3
REL	111	Eastern Religions	3
REL	112	Western Religions	3

Mathematics Elective

(Select 3.0 hours from the following courses)

MAT	145	Analytical Math	3
MAT	145A	Analytical Math Lab	1
MAT	140	Survey of Mathematics	3
MAT	140A	Survey of Mathematics Lab	1
MAT	151	Statistics I	3
MAT	151A	Statistics I Lab	1
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Pre-Calculus Algebra	3
MAT	171A	Pre-Calculus Algebra Lab	1
MAT	121	Algebra/Trigonometry	3

Communication Elective

(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

ANT	210	General Anthropology	3
ECO	251	Prin. Of Microeconomics	3
ECO	252	Prin. of Macroeconomics	3
HIS	111	World Civilization I	3
POL	110	Intro to Political Science	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3

Major Courses

CIS	110	Introduction to Computers	3
CIS	115	Introduction to Programming and Logic	3
CTS	115	Information Systems Business Concepts	3
DBA	110	Database Concepts	3
NET	110	Networking Concepts	3
NOS	110	Operating System Concepts	3
SEC	110	Security Concepts	3
WEB	110	Internet/Web Fundamentals	3
WEB	111	Introduction to Web Graphics	3
WEB	115	Web Markup and Scripting	3
WEB	120	Introduction to Internet Multimedia	3
WEB	140	Web Development Tools	3
WEB	180	Active Server Pages	3
WEB	210	Web Design	3
WEB	230	Implementing Web Servers	3
WEB	250	Database-Driven Websites	3
WEB	260	E-Commerce Infrastructure	3
WEB	287	Web E-Portfolio	2

Major Electives List 1

Select 3 hours from the following courses

COE	113	Co-op Work Experience I	3
WEB	182	PHP Programming	3
WEB	198	Selected Topic	3
WEB	211	Advanced Web Graphics	3
WEB	215	Advanced Markup and Scripting	3
SGD	168	Mobile SG Programming I	3
WEB	125	Mobile Web Design	3
WEB	141	Mobile Interface Design	3
WEB	151	Mobile Application Dev I	3
WEB	187	Prog for Mobile Devices	3
WEB	213	Internet Marketing & Analytics	3
WEB	225	Content Management Systems	3

Major Electives List 2

Select 3 hours from the following courses

GRD	152	Computer Design Tech I	3
CSC	151	Java Programming	3
SGD	268	Mobile SG Programming II	3
WEB	186	XML Technology	3
WEB	220	Advanced Multimedia	3
WEB	298	Seminar: Internet Technologies	3
WEB	179	JAVA Web Programming	3
WEB	214	Social Media	3
WEB	251	Mobile Applications Dev II	3

Graduation Requirements ..... 74 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

COMPUTER & ENGINEERING TECHNOLOGIES

MOBILE CONTENT DEVELOPMENT - D25290

– Day, Online

___	___	Communication Elective	3
___	___	Math Elective	3

Mathematics Elective

(Select 3.0 hours from the following courses)

MAT	145	Analytical Math	3
MAT	145A	Analytical Math Lab	1
MAT	140	Survey of Mathematics	3
MAT	140A	Survey of Mathematics Lab	1
MAT	151	Statistics I	3
MAT	151A	Statistics I Lab	1
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
MAT	171	Pre-Calculus Algebra	3
MAT	171A	Pre-Calculus Algebra Lab	1
MAT	121	Algebra/Trigonometry	3

Communication Elective

(Select 3.0 hours from the following courses)

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3

Major Electives

CIS	115	Introduction to Programming and Logic	3
WEB	110	Internet/Web Fundamentals	3
WEB	111	Introduction to Web Graphics	3
WEB	140	Web Development Tools	3
WEB	141	Mobile Interface Design	3
WEB	187	Prog for Mobile Devices	3
DBA	110	Database Concepts	3
SGD	168	Mobile SG Programming I	3
WEB	115	Web Markup and Scripting	3
WEB	125	Mobile Web Design	3
WEB	251	Mobile Applications Dev II	3
SGD	268	Mobile SG Programming II	3
WEB	151	Mobile Application Dev I	3

Completion Requirements ..... 45 Credit Hours

ANDROID APPLICATION - C25290E

– Online

CIS	115	Introduction to Programming and Logic	3
WEB	187	Prog for Mobile Devices	3
WEB	141	Mobile Interface Design	3
WEB	151	Mobile Application Dev I	3

Completion Requirements ..... 12 Credit Hours

E-COMMERCE PROGRAMMING - C25290B

-- Online

This certificate will prepare students to design and maintain web sites using industry standard tools. Graduates should qualify for career opportunities as webmasters or web designers within businesses, Government institutions, non-profit organizations or to freelance their services.

WEB	115	Web Markup and Scripting	3
WEB	180	Active Server Pages	3
WEB	182	PHP Programming	3
WEB	225	Content Management Systems	3
WEB	250	Database-Driven Websites	3
WEB	260	E-Commerce Infrastructure	3

Completion Requirements ..... 18 Credit Hours

iOS APPLICATION DEVELOPER - C25290D

-Online

CIS	115	Introduction to Programming and Logic	3
WEB	251	Mobile Applications Dev II	3
SGD	268	Mobile SG Programming II	3
WEB	141	Mobile Interface Design	3
SGD	168	Mobile SG Programming I	3
SGD	112	SG Design	3

Completion Requirements ..... 18 Credit Hours

WEB DESIGNER - C25290C

– Online

Using industry standard technologies to design and develop functioning e-commerce sites for the global marketplace. Students will learn XHTML, PHP, JavaScript, MySQL and ASP.net.

WEB	110	Internet/Web Fundamentals	3
WEB	111	Introduction to Web Graphics	3
WEB	120	Introduction to Internet Multimedia	3
WEB	140	Web Development Tools	3
WEB	210	Web Design	3
WEB	211	Advanced Web Graphics	3

Completion Requirements 18 Credit Hours

WEB DEVELOPER - C25290A

– Online

This certificate will prepare students to develop web sites using industry standard scripting and programming. Students will learn XHTML, PHP, JavaScript, ASP.Net and XML.

WEB	110	Internet/Web Fundamentals	3
WEB	115	Web Markup and Scripting	3
WEB	180	Active Server Programming	3
WEB	182	PHP Programming	3
WEB	186	XML Technology	3
WEB	225	Content Management Systems	3

Completion Requirements ..... 18 Credit Hours

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu

General Education

Dean Diane Lodder
Phone: 919-866-5198
Email: delodder@waketech.edu

Associate In General Education (A.G.E.) - A10300

OFFICIAL CURRICULUM SCHEDULE

COURSE REQUIREMENTS **CREDIT HOURS**

English/Communications 6
ENG 111 Expository Writing 3
ENG 114 Professional Research and Reporting.....3

Humanities/Fine Arts.....3
Select from courses in art, foreign language, humanities, literature, music, philosophy, and religion.

Social/Behavioral Sciences 3
Select from courses in economics, history, political science, psychology, and sociology.

Natural Sciences/Mathematics.....3
Select from courses in biology, chemistry, geology, physics, and mathematics.

Computer Science 2
CIS 111 Basic PC Literacy (1 2 2)

Electives.....47
Select from associate degree level courses in English/communications, humanities/fine arts, social/ behavioral sciences, and natural sciences/ mathematics, or any specialty courses as selected by the student and approved by the student's advisor.

Graduation Requirements ..... 64 Credit Hours

ASSOCIATE IN GENERAL EDUCATION

Vocational and Technical Instructors' Option

This option is designed for teachers of vocational and technical programs in technical colleges, trade schools, high schools, and similar institutions, as well as for practitioners of specific vocations. In addition to completing the core requirements for the Associate in General Education degree, the student may receive credit for previous training, experience, and formal study in the student's area of specialization. A maximum of sixteen hours of elective credit may be granted as follows:

I. Sixteen semester hours of credit for full-time trade school instruction (twelve months/1440 hours) in one special skilled area. Certified by transcript, diploma, or letter from trade school. Maximum sixteen semester hours of credit.

II. One semester hour of credit per ninety hours of full-time trade school instruction for programs of less than one-year duration. Certified by transcript, diploma, or letter from trade school. Maximum sixteen semester hours of credit.

III. One semester hour of credit per sixty hours of special short course instruction by a company-sponsored school. Certified by diploma, certificate, or letter from company school. Maximum three semester hours of credit.

IV. Three semester hours of credit for a full year of employment (outside of Wake Technical Community College) in a situation where teaching was the primary employment. Maximum three semester hours of credit.

V. Five semester hours of credit for each full year of employment at Wake Technical Community College with teaching the specialty courses as the primary responsibility. Maximum fifteen semester hours of credit.

VI. One semester hour of credit for each full year of employment in the specialty occupation qualified to teach. Maximum five semester hours of credit.

Credits earned in industrial and/or vocational programs offered by regionally-accredited, collegiate-level institutions are acceptable in meeting requirements in the area of specialization.

The student will be required to provide sufficient documentation to substantiate the suitability of previous training, experience, and formal study for credit.

Health Sciences

Health Sciences Information: 919-747-0400

Dean Dianne Hinson
Phone: 919-747-0007
Email: dbhinson@waketech.edu

The table below shows the current degrees, diplomas, and certificates the Health Sciences division offers. The highest credential given in each area is listed first, in bold type.

The "Program Offered" column represents *when* the program is offered:

D = Day
E = Evening
O = Distance learning or Online learning

Program Name	Program Offered	Program Code
Associate Degree Nursing – *AAS Degree*	D	A45110
Associate Degree Nursing (LPN to RN Advanced Placement Option) **– *AAS Degree***	D	A45110
Computed Tomography Technology - *Certificate*	D	C45200
Dental Assisting - Diploma	D	D45240
Dental Hygiene – AAS Degree	D	A45260
Emergency Medical Science – *AAS Degree*	D	A45340
General Occupational Technology – *AAS Degree*	D, E	A55280
Human Services Technology – *AAS Degree*	D, E	A45380
Human Services Technology: Basic **– *Certificate***	D, E	C45380
Services for the Aging **- *Certificate***	D, E	C45380B
Human Services Technology/Substance Abuse – *AAS Degree*	D, E	A4538E
Substance Abuse **- *Certificate***	D, E	C4538E
Magnetic Resonance Imaging - *Diploma*	D	D45800
Medical Assisting – *AAS Degree*	D	A45400
Medical Assisting **- *Diploma***	D	D45400
Medical Laboratory Technology – *AAS Degree*	D	A45420
Pharmacy Technology – *AAS Degree**	D	A45580
Pharmacy Technology **– *Diploma****	D	D45580
Phlebotomy - *Certificate*	D	C45600
Radiography – AAS Degree	D	A45700
Surgical Technology - *Diploma*	D	D45740
Therapeutic Massage - *Diploma*	D	D45750

***Collaborative Agreements**

Pharmacy Technology AAS *Degree and* ***Pharmacy Technology Diploma*** *agreement with Johnston Community College*

Associate Degree Nursing

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.

ASSOCIATE DEGREE NURSING - A45110

-Day

General Education Courses

BIO	168	Anatomy and Physiology I	4
BIO	169	Anatomy and Physiology II	4
ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

BIO	155	Nutrition	3
BIO	175	General Microbiology	3
BIO	271	Pathophysiology	3
NUR	111	Introduction 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

Graduation Requirements ..... 75 Credit Hours

ASSOCIATE DEGREE NURSING - A45110 LPN TO RN – ADVANCED PLACEMENT OPTION

-Day

General Education Courses

BIO	168	Anatomy and Physiology I	4
BIO	169	Anatomy and Physiology II	4
ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

BIO	155	Nutrition	3
BIO	175	General Microbiology	3
BIO	271	Pathophysiology	3
NUR	114	Holistic Health Concepts	5
NUR	212	Health System Concepts	5
NUR	213	Complex Health Concepts	10
NUR	214	Nursing Transition	4
		Licensed Practical Nurses Advanced Placement Option Credits	19

Graduation Requirements ..... 75 Credit Hours

Computed Tomography Technology

The Computed Tomography Technology curriculum prepares the individual to use specialized equipment to visualize cross-sectional anatomical structures and aid physicians in the demonstration of pathologies and disease processes**.** ***Individuals entering this curriculum must be registered or registry- eligible radiologic technologists, radiation therapists, or nuclear medicine technologists.***

Course work prepares the technologist to provide patient care and perform studies utilizing imaging equipment, professional communication, and quality assurance in scheduled and emergency procedures through academic and clinical studies.

Graduates may be eligible to sit for the American Registry of Radiologic Technologist Advanced-Level testing in Computed Tomography examination. They may find employment in facilities which perform these imaging procedures.

COMPUTED TOMOGRAPHY TECHNOLOGY-C45200

-Day

Major Courses

CAT	210	CT Physics and Equipment	3
CAT	211	CT Procedures	4
CAT	223	CT Clinical Practicum	3
CAT	225	CT Clinical Practicum	5
CAT	261	CT Exam Prep	1

Completion Requirements ..... 16 Credit Hours

Dental Assisting

The Dental Assisting curriculum prepares individuals to assist the dentist in the delivery of dental treatment and to function as integral members of the dental team while performing chairside and related office and laboratory procedures.

The Dental Assisting Program at Wake Technical Community College is accredited by the American Dental Association and therefore a graduate is classified as a DA II by the North Carolina State Board of Dental Examiners. The student may also be eligible to take the General Chairside Exam in order to be a Certified Dental Assistant (CDA). As a Dental Assistant II (DAII), defined by the Dental Laws of North Carolina, graduates can perform identified expanded functions including coronal polishing.

Course work includes instruction in general studies, biomedical sciences, dental sciences, clinical sciences, and clinical practice. A combination of lecture, laboratory or pre-clinical, and clinical experiences provide the students with knowledge in infection/hazard control, radiography, dental materials, preventive dentistry, and clinical procedures. The students receive their hands-on patient care clinical experience with rotations at the UNC School of Dentistry, Wake County Human Services-Dental Clinic, and private general and specialty dental practices within Wake County.

DENTAL ASSISTING - D45240

-Day

General Education Courses

BIO	106	Introduction to Anatomy/ Physiology/Microbiology	3
COM	120	Interpersonal Communication	3
ENG	111	Expository Writing	3
PSY	118	Interpersonal Psychology	3

Major Courses

DEN	100	Basic Orofacial Anatomy	2
DEN	101	Preclinical Procedures	7
DEN	102	Dental Materials	5
DEN	103	Dental Sciences	2
DEN	104	Dental Health Education	3
DEN	105	Practice Management	2
DEN	106	Clinical Practice I	5
DEN	107	Clinical Practice II	5
DEN	111	Infection/Hazard Control	2
DEN	112	Dental Radiography	3

Graduation Requirements ..... 48 Credit Hours

Dental Hygiene

The Dental Hygiene curriculum provides individuals with the knowledge and skills to assess, plan, implement, and evaluate dental hygiene care for the individual and the community.

Students will learn to prepare the operatory, take patient histories, note abnormalities, plan care, teach oral hygiene, clean teeth, take x-rays, apply preventive agents, complete necessary chart entries, and perform other procedures related to dental hygiene care.

Graduates of this program may be eligible to take national and state/regional examinations for licensure which are required to practice dental hygiene. Employment opportunities include dental offices, clinics, schools, public health agencies, industry, and professional education.

DENTAL HYGIENE - A45260

-Day

General Education Courses

ENG	111	Expository Writing	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
CHM	130	General, Organic and Biochemistry	3
COM	120	Interpersonal Communication	3
		Humanities/Fine Arts Elective	3

Major Courses

BIO	163	Basic Anatomy	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 Hygiene Preclinic Lecture	2
DEN	121	Dental Hygiene Preclinic Lab	2
DEN	123	Nutrition and Dental Health	2
DEN	124	Periodontology	2
DEN	125	Dental Office Emergencies	1
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 and 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

Graduation Requirements ..... 73 Credit Hours

Emergency Medical Science

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 emergency medical service, fire and rescue agencies, air medical services, specialty areas of hospitals, industry, educational institutions, and government agencies.

EMERGENCY MEDICAL SCIENCE - A45340

-Day

General Education Courses

ACA	118	College Study Skills	2
BIO	163	Anatomy and Physiology	5
COM	120	Interpersonal Communication	3
ENG	111	Expository Writing	3
MAT	110	Mathematical Measurement	3
PSY	150	General Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

EMS	110	EMT-Basic	7
EMS	120	Intermediate Interventions	3
EMS	121	EMS Clinical Practicum I	2
EMS	125	EMS Instructor Methodology	2
OR			
EMS	235	EMS Management	2
EMS	130	Pharmacology I for EMS	2
EMS	131	Advanced Airway Management	2
EMS	140	Rescue Scene Management	2
EMS	150	Emergency Vehicles and EMS Communication	2
EMS	210	Advanced Patient Assessment	2
EMS	220	Cardiology	4
EMS	221	EMS Clinical Practicum II	3
EMS	230	Pharmacology II for EMS	2
EMS	231	EMS Clinical Practicum III	3
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

Graduation Requirements ..... 73 Credit Hours

General Occupational Technology

The General Occupational Technology curriculum provides individuals with an opportunity to upgrade their skills and to earn an associate degree by taking courses suited for their occupational interests and/or needs.

The curriculum content will be individualized for students according to their occupational interests and needs. A program of study for each student will be selected from associate degree-level

courses offered by the College.
Graduates will become more effective workers, better qualified for advancements within their field of employment, and become qualified for a wide range of entry-level employment opportunities.

Students must consult with their advisors prior to registration.

GENERAL OCCUPATIONAL TECHNOLOGY - A55280

–Day, Evening

General Education Requirements (15 to 18 Credits)

ENG	111	Expository Writing	3

One of the following ENG courses:

ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research and Reporting	3

One of the following BIO courses:

BIO	106	Introduction to Anatomy/Physiology/Microbiology	3
BIO	161	Introductory to Human Biology	3
BIO	163	Basic Anatomy and Physiology	5
BIO	165	Anatomy and Physiology I	4

One of the following PSY courses:

PSY	110	Life Span Development	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3

One of the following Humanities/Fine Arts courses:

HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3
PHI	240	Introduction to Ethics	3

Other Course Requirements (46 to 49 Credits)
Select from the following list. Do not select courses taken to satisfy the General Education Requirements above.

ACA	111	College Student Success	1
ACA	115	Success and Study Skills	1
ACA	118	College Study Skills	2
BIO	106	Introduction to Anatomy/Physiology/Microbiology	3
BIO	155	Nutrition	3
BIO	161	Introductory to Human Biology	3
BIO	163	Basic Anatomy and Physiology	5
BIO	165	Anatomy and Physiology I	4
BIO	166	Anatomy and Physiology II	4
BIO	175	General Microbiology	3
BIO	271	Pathophysiology	3
CHM	130	General, Organic, and Biochemistry	3
CHM	131	Introduction to Chemistry	3
CHM	151	General Chemistry	4
CIS	110	Introduction to Computers	3
CIS	111	Basic PC Literacy	2
COM	120	Interpersonal Communication	3
COM	231	Public Speaking	3
HUM	*	Humanities/Fine Arts Elective	3
MAT	110	Mathematical Measurement	3
MAT	115	Mathematical Models	3
MAT	161	College Algebra	3
MAT	161A	College Algebra Lab	1
OST	141	Medical Terms I – Medical Office	3
OST	142	Medical Terms II – Medical Office	3
OST	149	Medical Legal Issues	3
OST	241	Medical Office Transcription I	2
PSY	110	Life Span Development	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
PSY	281	Abnormal Psychology	3
SOC	210	Introduction to Sociology	3
SOC	213	Sociology of the Family	3
SOC	220	Social Problems	3

Graduation Requirements ..... 64 Credit Hours

Human Services Technology

The Human Services Technology curriculum prepares students for entry-level positions in institutions and agencies that provide social, community, and educational services. Along with core courses, students take courses that prepare them for specialization in specific human service areas.

Students will take courses from a variety of disciplines. Emphasis in core courses is placed on development of relevant knowledge, skills, and attitudes in human services. Fieldwork experience will provide opportunities for application of knowledge and skills learned in the classroom.

Graduates should qualify for positions in mental health, child care, family services, social services, rehabilitation, correction, and educational agencies. Former graduates have successfully transferred into select 4-year colleges and universities.

HUMAN SERVICES TECHNOLOGY - A45380

-Day, Evening

General Education Courses

BIO	161	Introduction to Human Biology	3
CIS	110	Introduction to Computers	3
ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
PSY	281	Abnormal Psychology	3
SOC	210	Introduction to Sociology	3
		Humanities/Fine Arts Elective	3

Major Courses

COE	111	Co-op Work Experience I	1
COE	115	Work Experience Seminar I	1
GRO	120	Gerontology	3
HSE	110	Introduction to Human Services	3
HSE	112	Group Process I	2
HSE	115	Health Care Concepts	4
HSE	123	Interviewing Techniques	3
HSE	125	Counseling	3
HSE	210	Human Services Issues	2
HSE	220	Case Management	3
HSE	225	Crisis Intervention	3
HSE	242	Family Systems	3
HSE	255	Health Problems and Prevention	3
SAB	110	Substance Abuse Overview	3
SWK	113	Working with Diversity	3

Major Electives

Select 3 hours from the following courses

COE	121	Co-op Work Experience II	1
COE	125	Work Experience Seminar II	1
GRO	150	Substance Use and Aging	3
GRO	240	Gerontology Care Managing	2
HEA	110	Personal Health/Wellness	3
HSE	145	Child Abuse and Neglect	3
HSE	240	Issues in Client Services	3
HSE	250	Financial Services	2
SWK	110	Introduction to Social Work	3

Graduation Requirements ..... 70 Credit Hours

HUMAN SERVICES TECHNOLOGY: BASIC - C45380

– Day, Evening

Major Courses

COE	111	Co-op Work Experience I	1
COE	115	Work Experience Seminar I	1
HSE	110	Introduction to Human Services	3
HSE	115	Health Care Concepts	4
HSE	220	Case Management	3
HSE	255	Health and Prevention: Mental Health	3
SWK	113	Working with Diversity	3

Completion Requirements ..... 18 Credit Hours

SERVICES FOR THE AGING - C45380B

The certificate in Services for the Aging is designed to provide basic knowledge and skills in the care of the elderly for those individuals who work with or would like to work with older adults.

Human Services workers specializing in services for the aging work with older adults and their families. They understand issues of aging, including the physical, psychological and social aspects of the aging process, as well as health, wellness, nutrition, diet, exercise and well-being. Graduates tend to work under the direction of staff from a variety of fields, such as nursing, psychiatry, psychology, rehabilitative or social work.

Graduates should qualify for employment in nursing and retirement facilities, specialized adult care services, respite services and other programs servicing older adults and their families. These courses are part of the Human Services curriculum and can be transferred into the Associate in Applied Science Degree.
-Day, Evening

Major Courses

COE	111	Co-op Work Experience I	1
COE	115	Work Experience Seminar I	1
GRO	120	Gerontology	3
GRO	150	Substance Use and Aging	3
GRO	240	Gerontology Care Managing	2
HSE	115	Health Care Concepts	4
PSY	150	General Psychology	3

Completion Requirements .....17 Credit Hours

Human Services Technology / Substance Abuse

The Human Services Technology/Substance Abuse concentration prepares students to assist in drug and alcohol counseling, prevention-oriented educational activities, rehabilitation with recovering clients, managing community-based programs, counseling in residential facilities, and pursuit of four-year degrees.

Course work includes classroom and experiential activities oriented toward an overview of chemical dependency, psychological/sociological process, the twelve Core Functions, intervention techniques with individuals in groups, and follow-up activities with recovering clients.

Graduates should qualify for positions as substance abuse counselors, DUI counselors, halfway house workers, residential facility employees, and substance education specialists. With educational and clinical experiences, graduates can obtain certification by the North Carolina Substance Abuse Board.

HUMAN SERVICES TECHNOLOGY/ SUBSTANCE ABUSE - A4538E

-Day, Evening

General Education Courses

BIO	161	Introduction to Human Biology	3
CIS	110	Introduction to Computers	3
ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
PSY	281	Abnormal Psychology	3
SOC	210	Introduction to Sociology	3
		Humanities/Fine Arts Elective	3

Major Courses

COE	111	Co-op Work Experience I	1
COE	115	Work Experience Seminar I	1
COE	121	Co-op work Experience II	1
HSE	110	Introduction to Human Services	3
HSE	112	Group Process I	2
HSE	123	Interviewing Techniques	3
HSE	125	Counseling	3
HSE	210	Human Services Issues	2
HSE	225	Crisis Intervention	3
HSE	242	Family Systems	3
SAB	110	Substance Abuse Overview	3
SAB	120	Intake and Assessment	3
SAB	125	SAB Case Management	3
SAB	135	Addictive Process	3
SAB	210	Substance Abuse Counseling	3
SAB	220	Group Techniques/Therapy	3
SAB	240	SAB Issues in Client Services	3
SWK	113	Working with Diversity	3

Graduation Requirements .....73 Credit Hours

HUMAN SERVICES TECHNOLOGY/ SUBSTANCE ABUSE - C4538E

The Substance Abuse Counseling Certificate is designed to appeal to individuals who already hold a bachelor or master's degree in another discipline. In addition, students should have an affinity for people suffering from addictive illnesses and an interest in specialized training for certification or licensure in Substance Abuse Counseling. Upon completion of the certificate and registration with the professional board, students will qualify to take the written exam for the Substance Abuse Counseling credential.
-Day, Evening

Major Courses

SAB	120	Intake and Assessment	3
SAB	135	Addictive Process	3
SAB	210	Substance Abuse Counseling	3
SAB	240	Substance Abuse Issues	3
COE	111	Co-op Work Experience I	1
COE	115	Work Experience Seminar I	1

Completion Requirements ..... 14 Credit Hours

Magnetic Resonance Imaging Technology

The Magnetic Resonance Imaging (MRI) curriculum prepares students to become MRI technologists and skilled health care professionals who are educated to use magnetic energy fields to produce images of the human body. Individuals entering this program must be registered or registry-eligible radiologic technologists by the American Registry of Radiologic

Technologists.

Course work includes imaging fundamentals, MRI physics, procedures, anatomy, pathology, patient care, imaging ethics and law, in a medical environment. Students should be able to demonstrate all functional areas related to the magnetic resonance imaging fields.

Graduates may be eligible to take the American Registry of Radiologic Technologists (ARRT) national examination for certification as MRI technologists.

Graduates may be employed in hospitals, outpatient clinics, physicians' offices, government agencies, and research. It is essential that the MRI technologist understands ethical standards and the legal framework for MRI. In addition, the MRI technologist must be committed to professional development and the care of others.

MAGNETIC RESONANCE IMAGING TECHNOLOGY - D45800

-Day

General Education Courses

ENG	111	Expository Writing	3
Humanities/Fine Arts Elective			3

Major Courses

IMG	130	Imaging Ethics and Law..	3
MRI	213	MR Patient Care and Safety..	2
MRI	214	MRI Procedures I	2
MRI	215	MRI Procedures II	2
MRI	216	MRI Instrumentation	2
MRI	217	MRI Physics I	2
MRI	218	MRI Physics II	2
MRI	241	MRI Anatomy and Path I	2
MRI	242	MRI Anatomy and Path II	2
MRI	250	MRI Clinical Ed I	4
MRI	260	MRI Clinical Ed II	7
MRI	270	MRI Clinical Ed III	8
MRI	271	MRI Capstone	1

Completion Requirements ..... 45 Credit Hours

Medical Assisting

The Medical Assisting curriculum prepares multi-skilled health care professionals qualified to perform administrative, clinical, and laboratory procedures.

Course work includes instruction in scheduling appointments, coding and processing insurance accounts, billing, collections, computer operations; assisting with examinations/treatments, performing routine laboratory procedures, electro-cardiography, supervised medication administration; and ethical/legal issues associated with patient care.

The Medical Assisting Education Review Board (MAERB), an autonomous unit within the Endowment, evaluates medical assisting programs according to Standards adopted by the American Association of Medical Assistants (AAMA), the American Medical Association (AMA), and the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The MAERB then recommends programs to CAAHEP for accreditation.

Graduates of CAAHEP accredited medical assisting diploma program may be eligible to sit for the American Association of Medical Assistants' Certification Examination, the CMA (AAMA) exam, to become Certified Medical Assistants. Employment opportunities include physicians' offices, health maintenance organizations, health departments, and outpatient clinics.

MEDICAL ASSISTING Diploma - D45400

-Day

General Education Courses

ENG	111	Expository Writing	3
MAT	110	Mathematical Measurement	3

Major Courses

BIO	161	Intro to Human Biology	3
MED	110	Orientation to Medical Assisting	1
MED	118	Medical Law and Ethics	2
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	3
MED	130	Administrative Office Procedures I	2
MED	131	Administrative Office Procedures II	2
MED	138	Infection/Hazard Control	2
MED	140	Examining Room Procedures I	5
MED	150	Laboratory Procedures I	5
MED	260	Medical Clinical Externship	5
MED	262	Clinical Perspectives	1
MED	264	Medical Assisting Overview	.2
MED	276	Patient Education	2

Graduation Requirements ..... 44 Credit Hours

MEDICAL ASSISTING Degree - A45400

Students who have successfully completed the one-year Medical Assisting diploma can choose to continue their education by completing the Medical Assisting degree. The Medical Assisting associate degree completion program is designed for Medical Assistants who desire an associate degree for career advancement or transfer purposes. Please note that to be eligible for the Medical Assisting degree, a student must have completed BIO 163, which has a prerequisite of chemistry. If a student completed BIO 161 successfully in their diploma program, they will still need to complete BIO 163.

-Day

Additional Courses Required for the Medical Assisting Degree – A45400

Additional General Education Courses

BIO	155	Nutrition	3
BIO	163	Basic Anatomy and Physiology	5
CIS	111	Basic PC literacy	2
SPA	120	Spanish for the Workplace	3
		Humanities/Fine Art elective	3

Choose one:

ENG	112	Argument-Based Research	3
COM	120	Interpersonal Communication	3

Choose one:

PSY	110	Life Span Development	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

Additional Major Courses

MED	270	Symptomatology	3
MED	272	Drug Therapy	3
MED	232	Medical Insurance Coding	2

Graduation Requirements ..... 71 Credit Hours

Medical Laboratory Technology

The Medical Laboratory Technology curriculum prepares individuals to perform clinical laboratory procedures in chemistry, hematology, microbiology, and immunohematology that may be used in the maintenance of health and diagnosis/treatment of disease.

Course work emphasizes mathematical and scientific concepts related to specimen collection, laboratory testing and procedures, quality assurance, and reporting/recording and interpreting findings involving tissues, blood, and body fluids.

Graduates may be eligible to take the examination given by the Board of Certification of the American Society for Clinical Pathology. Employment opportunities include laboratories in hospitals, medical offices, industry, and research facilities.

MEDICAL LABORATORY TECHNOLOGY - A45420

-Day

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
MAT	115	Mathematical Models	3
PSY	150	General Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

BIO	163	Basic Anatomy and Physiology	5
CIS	111	Basic PC Literacy	2
MLT	110	Introduction to MLT	3
MLT	111	Urinalysis and Body Fluids	2
MLT	115	Laboratory Calculations	2
MLT	118	Medical Lab Chemistry	3
MLT	120	Hematology/Hemostasis I	4
MLT	125	Immunohematology I	5
MLT	130	Clinical Chemistry I	4
MLT	140	Introduction to Microbiology	3
MLT	217	Professional Issues	1
MLT	220	Hematology/Hemostasis II	3
MLT	230	Clinical Chemistry II	3
MLT	240	Special Clinical Microbiology	3
MLT	254	MLT Practicum I	4
MLT	266	MLT Practicum II	6
MLT	276	MLT Practicum III	6
MLT	280	Special Practice Lab	1

Graduation Requirements ..... 75 Credit Hours

Phlebotomy

The Phlebotomy curriculum prepares individuals to obtain blood and other specimens for the purpose of laboratory analysis.

Course work includes proper specimen collection and handling, communication skills, and maintaining patient data. Graduates may be eligible to take the examination given by Board of Certification of the American Society for Clinical Pathology.

Graduates may qualify for employment in hospitals, clinics, physicians' offices, and other health care settings and may be eligible for national certification as phlebotomy technicians.

The Phlebotomy program is a one semester program offered each Fall and Spring semester.

PHLEBOTOMY - C45600

-Day Only

Major Courses

PBT	100	Phlebotomy Technology	6
PBT	101	Phlebotomy Practicum	3
PSY	118	Interpersonal Psychology	3

Completion Requirements ..... 12 Credit Hours

Pharmacy Technology

The Pharmacy Technology Program prepares individuals to become pharmacy technicians. These allied health professionals assist and support licensed pharmacists in providing medications and other health care products to patients. Pharmacy technicians maintain patient's records; fill prescriptions; maintain inventories; set up, package, and label medication doses; prepare solutions and intravenous additives; and perform clerical duties, including insurance forms and forms required by third-party payers. Students will obtain a broad knowledge of the actions and uses of drugs, pharmacology, pharmaceutical calculations, anatomy and physiology, drug delivery systems, pharmacy administration, medical terminology and abbreviations through the course work. Through the simulated pharmacy technology laboratory activities and the clinical experiences, students will increase their management, organizational, interpersonal, customer relations, computer and communication skills as well as their skills in performing pharmacy-related functions. The clinical practice will take place in medical centers and retail pharmacies. The Pharmacy Technology Program has been designed to meet the accreditation standards of the American Society of Health-System Pharmacists.

Graduates may be employed in hospitals, nursing homes, private and chain drug stores, research laboratories, wholesale drug companies, and pharmaceutical manufacturing facilities. Graduates will qualify to take the National Certification Examination developed by the Pharmacy Technician Certification Board.

The Pharmacy Technology program is a collaborative program offered by Johnston Community College and Wake Technical Community College.

PHARMACY TECHNOLOGY - A45580

General Education Courses

BIO	163	Basic Anatomy and Physiology	5
CIS	110	Introduction to Computers	3
ENG	111	Expository Writing	3
ENG	112	Argument Based Research	3
PSY	150	General Psychology	3
----	---	Humanities Elective	3

Major Courses

PHM	110	Introduction to Pharmacy	3
PHM	111	Pharmacy Practice I	4
PHM	115	Pharmacy Calculations	3
PHM	115A	Pharmacy Calculations Lab	1
PHM	118	Sterile Products	4
PHM	120	Pharmacology I	3
PHM	125	Pharmacology II	3
PHM	132	Pharmacy Clinical	2
PHM	133	Pharmacy Clinical	3
PHM	134	Pharmacy Clinical	4
PHM	135	Pharmacy Clinical	5
PHM	140	Trends in Pharmacy	2
PHM	150	Hospital Pharmacy	4
PHM	155	Community Pharmacy	3
PHM	160	Pharm Dosage Forms	3
PHM	165	Pharmacy Prof Practice	2

Graduation Requirements ..... 69 Credit Hours

PHARMACY TECHNOLOGY - D45580

General Education Courses

ENG	111	Expository Writing	3
BIO	163	Basic Anatomy and Physiology	5

Major Courses

PHM	110	Introduction to Pharmacy	3
PHM	111	Pharmacy Practice I	4
PHM	115	Pharmacy Calculations	3
PHM	115A	Pharmacy Calculations Lab	1
PHM	118	Sterile Products	4
PHM	120	Pharmacology I	3
PHM	125	Pharmacology II	3
PHM	132	Pharmacy Clinical	2
PHM	134	Pharmacy Clinical	4
PHM	140	Trends in Pharmacy	2
PHM	155	Community Pharmacy	3
PHM	165	Pharmacy Prof Practice	2

Graduation Requirements ..... 42 Credit Hours

Radiography

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. The radiographer must be committed to professional development and the care of others.

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.

RADIOGRAPHY - A45700

-Day

General Education Courses

BIO	163	Basic Anatomy and Physiology	5
ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
HUM	115	Critical Thinking	3
PSY	150	General Psychology	3
MAT	115	Mathematical Models	3
	or		
MAT	140	Survey of Mathematics	3
	and		
MAT	140A	Survey of Mathematics Lab	1

Major Courses

RAD	110	Radiography Introduction and Patient Care	3
RAD	111	Radiographic Procedures I	4
RAD	112	Radiographic Procedures II	4
RAD	121	Radiographic Imaging I	3
RAD	122	Radiographic Imaging II	2
RAD	131	Radiographic Physics I	2
RAD	151	Radiographic Clinical Education I	2
RAD	161	Radiographic Clinical Education II	5
RAD	171	Radiographic Clinical Education III	4
RAD	211	Radiographic Procedures III	3
RAD	231	Radiographic Physics II	2
RAD	241	Radiobiology/Protection	2
RAD	245	Image Analysis	2
RAD	251	Radiographic Clinical Education IV	7
RAD	261	Radiographic Clinical Education V	7
RAD	271	Radiography Capstone	1

Graduation Requirements:

..... 73 Credit Hours (if taking MAT 115)
..... 74 Credit Hours (if taking MAT 140 and MAT 140A)

Surgical Technology

The Surgical Technology curriculum prepares individuals to assist in the care of the surgical patient in the operating room and to function as a member of the surgical team.
Students 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 supply processing units.

SURGICAL TECHNOLOGY - D45740

-Day

General Education Courses

ENG	111	Expository Writing	3
BIO	163	Basic Anatomy and Physiology	5

Major Courses

SUR	110	Introduction to Surgical Technology	3
SUR	111	Preoperative Patient Care	7
SUR	122	Surgical Procedures I	6
SUR	123	Clinical Practice I	7
SUR	134	Surgical Procedures II	5
SUR	135	Clinical Practice II	4
SUR	137	Professional Success Preparation	1

Graduation Requirements ..... 41 Credit Hours

Therapeutic Massage

The Therapeutic Massage curriculum prepares graduates to work in direct client care settings to provide manipulation, methodical pressure, friction and kneading of the body for maintaining wellness or treating alterations in wellness throughout the lifespan.

Courses will include content in normal human anatomy and physiology, therapeutic massage, ethical/legal issues, business practices, nutrition and psychology.

Employment opportunities in North Carolina may be found in hospitals, rehabilitation centers, health departments, home health, medical offices, nursing homes, spas, health and sports clubs, and private practice. Graduates may be eligible to take the Massage and Bodywork Licensing Exam, and apply for Licensure in North Carolina.

THERAPEUTIC MASSAGE - D45750

-Day

General Education Courses

ENG	111	Expository Writing	3
PSY	118	Interpersonal Psychology	3
	Or		
PSY	150	General Psychology	3

Major Courses

ACA	111	College Student Success	1
BIO	150	Nutrition	3
	Or		
BIO	271	Pathophysiology	3
BIO	163	Basic Anatomy and Physiology	5

BUS	137	Principles of Management	3
Or			
BUS	230	Small Business Management	3
Or			
BUS	280	REAL Small Business	4
MTH	110	Fundamentals of Massage	10
MTH	120	Therapeutic Massage Applications	10
MTH	121	Clinical Supplement I	1
MTH	125	Ethics of Massage	2

Graduation Requirements:
..... 41 Credit Hours if taking BUS 137 or BUS 230
..... 42 Credit Hours if taking BUS 280)

Remember to check the online College Catalog for the most up-to-date information at
http://catalog.waketech.edu

COURSE PREFIX IDENTIFICATION

ACA Academic Support
ACC Accounting
AHR Air Conditioning, Heating, & Refrigeration
ANT Anthropology
ARA Arabic
ARC Architecture
ART Art
AST Astronomy
ATR Automation and Robotics
AUT Automotive
BAF Baking and Finance
BIO Biology
BPA Baking and Pastry Arts
BPR Blueprint Reading
BUS Business
CAT Computed Tomography
CCT Cyber Crime Technology
CET Computer Engineering Technology
CHM Chemistry
CIS Information Systems
CIV Civil Engineering Technology
CJC Criminal Justice
CMT Construction Management
COE Cooperative Education
COM Communication
COS Cosmetology
CSC Computer Science
CST Construction
CTS Computer Information Technology
CUL Culinary
DBA Database Management Technology
DDF Design Drafting
DEN Dental
DES Design: Creative
DFT Drafting
DRA Drama/Theatre
ECM Electronic Commerce
ECO Economics
EDU Education
EFL English as a Foreign Language
EGR Engineering
ELC Electricity
ELN Electronics
EMS Emergency Medical Care
ENG English
ENV Environmental Science
FIP Fire Protection
FRE French
FST Food Service Technology
GEL Geology
GEO Geography
GIS Geographic Information Systems
GRA Graphic Arts
GRD Graphic Design
GRO Gerontology
HBI Healthcare Business Informatic
HEA Health
HET Heavy Equipment Maintenance
HIS History
HOR Horticulture
HPC High Performance Computing
HRM Hospitality Management
HSC Health Science
HSE Human Services
HUM Humanities
HYD Hydraulics and Pneumatics
IMG Imaging
INT International Business
ISC Industrial Science
ITN Internet Technologies
JOU Journalism
LAR Landscape Architecture
LOG Logistics Management
MAC Machining
MAT Mathematics
MEC Mechanical
MED Medical Assisting
MKT Marketing and Retailing
MLT Medical Laboratory Technology
MRI Magnetic Resonance Imaging
MSI Military Science
MTH Therapeutic Massage
MUS Music
NAS Nursing Assistant
NET Networking Technology
NOS Networking Operating System
NUR Nursing
OSS Operating Systems
OST Office Systems Technology
PBT Phlebotomy
PCI Process Control Instrumentation
PED Physical Education
PHI Philosophy
PHM Pharmacy
PHY Physics
PLA Plastics
PLU Plumbing
PME Power Mechanics
POL Political Science
PSY Psychology
PTC Pharmaceutical Technology
RAD Radiography
REA Real Estate Appraisal
RED Reading
REL Religion
RLS Real Estate
SAB Substance Abuse
SEC Information Systems Security
SGD Simulation and Game Development
SGR Scientific Graphics
SOC Sociology
SPA Spanish
SRV Surveying
SST Sustainability Technology
SUR Surgical Technology
SWK Social Work
TNE Telecommunications and Network Engineering Technology
WEB Web Technologies
WLD Welding

ACADEMIC RELATED (ACA Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ACA	**090**	**Study Skills**	2	3	0	3

Prerequisites: None
Corequisites: None
This course is intended for those who placed into credit-level course work but who are not maintaining satisfactory academic progress toward meeting program goals. Topics include study skills, note taking, learning styles and strategies, test taking, goal setting, and self-assessment skills. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

ACA	**111**	**College Student Success**	1	0	0	1

Prerequisites: None
Corequisites: None
This course introduces the college's physical, academic, and social environment and promotes the personal development essential for success. Topics include campus facilities and resources; policies, procedures, and programs; study skills; and life management issues such as health, self-esteem, motivation, goal-setting, diversity, and communication. Upon completion, students should be able to function effectively within the college environment to meet their educational objectives.

ACA	**115**	**Success and Study Skills**	0	2	0	1

Prerequisites: None
Corequisites: None
This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

ACA	**118**	**College Study Skills**	1	2	0	2

Prerequisites: None
Corequisites: None
This course covers skills and strategies designed to improve study behaviors. Topics include time management, note taking, test taking, memory techniques, active reading strategies, critical thinking, communication skills, learning styles, and other strategies for effective learning. Upon completion, students should be able to apply appropriate study strategies and techniques to the development of an effective study plan.

ACA	**120**	**Career Assessment**	1	0	0	1

Prerequisites: None
Corequisites: None
This course provides the information and strategies necessary to develop clear personal, academic, and professional goals. Topics include personality styles, goal setting, various college curricula, career choices, and campus leadership development. Upon completion, students should be able to clearly state their personal, academic, and professional goals and have a feasible plan of action to achieve those goals.

ACA	**122**	**College Transfer Success**	1	0	0	1

Prerequisites: RED 090 and ENG 090
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ACA	**220**	**Professional Transition**	1	0	0	1

Prerequisites: None
Corequisites: None
This course provides preparation for meeting the demands of employment or education beyond the community college experience. Emphasis is placed on strategic planning, gathering information on workplaces or colleges, and developing human interaction skills for professional, academic, and/or community life. Upon completion, students should be able to successfully make the transition to appropriate workplaces or senior institutions.

ACCOUNTING (ACC Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ACC	**120**	**Prin of Financial Acct**	32	0	4	

Prerequisites: None
Corequisites: None
This course introduces business decision-making using accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making and address ethical considerations. *This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

ACC	**121**	**Principles of Managerial Accounting**	3	2	0	4

Prerequisites: ACC 120
Corequisites: None
This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems. *This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

ACC 122 Prin of Financial Acct II 3 0 0 3
Prerequisites: ACC 120, CIS 110 or CIS 111
Corequisites: None
This course provides additional instruction in the financial accounting concepts and procedures introduced in ACC 120. Emphasis is placed on the analysis of specific balance sheet accounts, with in-depth instruction of the accounting principles applied to these accounts. Upon completion, students should be able to analyze data, prepare journal entries, and prepare reports in compliance with generally accepted accounting principles.

ACC 125 Mathematics of Finance 3 0 0 3
Prerequisites: BUS 121 or MAT 115
Corequisites: None
This course covers computations necessary in accounting for various business transactions. Emphasis is placed on time value of money concepts and calculations needed for topics such as stocks and bonds, annuities, sinking funds, and amortization. Upon completion, students should be able to make computations necessary in accounting for transactions involving these topics.

ACC 129 Individual Income Taxes 2 2 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual income tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms.

ACC 130 Business Income Taxes 2 2 0 3
Prerequisites: ACC 129
Corequisites: None
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.

ACC 131 Federal Income Taxes 2 2 0 3
Prerequisites: None
Corequisites: None
This course provides an overview of federal income taxes for individuals, partnerships, and corporations. Topics include tax law, electronic research and methodologies and the use of technology for the preparation of individual and business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax laws, and complete federal tax returns for individuals, partnerships, and corporations.

ACC 132 NC Business Taxes 2 0 0 2
Prerequisites: None
Corequisites: None
This course introduces the relevant laws governing North Carolina taxes as they apply to business. Topics include sales taxes, income taxes for business entities, payroll taxes, unemployment taxes, and other taxes pertaining to the State of North Carolina. Upon completion, students should be able to maintain a company's records to comply with the laws governing North Carolina business taxes.

ACC 140 Payroll Accounting 1 2 0 2
Prerequisites: ACC 115 or ACC 120, CIS 110 or CIS 111
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

ACC 149 Intro to Acc Spreadsheets 1 2 0 2
Prerequisites: ACC 115 or ACC 120, CIS 110 OR CIS 111
Corequisites: None
This course provides a working knowledge of computer spreadsheets and their use in accounting. Topics include pre-programmed problems, model-building problems, beginning-level macros, graphics, and what-if analysis enhancements of template problems. Upon completion, students should be able to use a computer spreadsheet to complete many of the tasks required in accounting.

ACC 150 Acct Software Appl 1 2 0 2
Prerequisites: ACC 115 or ACC 120, CIS 110 or CIS 111
Corequisites: None
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 also available through the Virtual Learning Community (VLC)*

ACC 151 Acct Spreadsheet Appl 1 2 0 2
Prerequisites: ACC 149
Corequisites: None
This course is designed to facilitate the use of spreadsheet technology as applied to accounting principles. Emphasis is placed on using spreadsheet software as a problem-solving and decision-making tool. 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.

ACC 152 Adv Software Appl 1 2 0 2
Prerequisites: ACC 150
Corequisites: None
This course provides continued exposure to commercial accounting software and the opportunity to refine skills developed in ACC 150. Emphasis is placed on advanced applications of software packages. Upon completion, students should be able to use commercial software to complete complex accounting tasks.

ACC 170 Technical Accounting 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the use of accounting for decision making and covers integration of financial accounting with managerial concepts. Topics include essentials of financial accounting and analysis, product costing, activity-based costing systems, budgeting, and financial planning. Upon completion, students should be able to understand and develop financial statements and demonstrate an understanding of accounting transactions and product costing systems.

ACC 175 Hotel and Restaurant Accounting 3 2 0 4
Prerequisites: MAT 115
Corequisites: None
This course covers generally accepted accounting principles and the uniform system of accounts for small hotels and motels of the American Hotel and Motel Association. Emphasis is placed on the accounting cycle, analysis of financial statements, and payroll procedures including treatment of tips. Upon completion, students should be able to demonstrate competence in the accounting principles and procedures used in hotels and restaurants.

ACC 180 Practices in Bookkeeping 3 0 0 3
Prerequisites: ACC 120
Corequisites: None
This course provides advanced instruction in bookkeeping and record-keeping functions. Emphasis is placed on mastering adjusting entries, correction of errors, depreciation, payroll, and inventory. Upon completion, students should be able to conduct all key bookkeeping functions for small business.

ACC 215 Ethics in Accounting 3 0 0 3
Prerequisites: ACC 121
Corequisites: None
This course introduces students to professional codes of conduct and ethics adopted by professional associations and state licensing boards for accountants, auditors, and fraud examiners. Topics include research and discussions of selected historical and contemporary ethical cases and issues as they relate to accounting and business. Upon completion, students should be able to apply codes, interpret facts and circumstances, as they relate to accounting firms and business activities.

ACC 220 Intermediate Accounting I 3 2 0 4
Prerequisites: ACC 120 and ACC 122
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

ACC 221 Intermediate Accounting II 3 2 0 4
Prerequisites: ACC 220
Corequisites: None
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.

ACC 225 Cost Accounting 3 0 0 3
Prerequisites: ACC 121
Corequisites: None
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.

ACC 226 Advanced Managerial Accounting 3 0 0 3
Prerequisites: ACC 121
Corequisites: None
This course is designed to develop an appreciation for the uses of cost information in the administration and control of business organizations. Emphasis is placed on how accounting data can be interpreted and used by management in planning and controlling business activities. Upon completion, students should be able to analyze and interpret cost information and present this information in a form that is usable by management.

ACC 227 Practices in Accounting 3 0 0 3
Prerequisites: ACC 220
Corequisites: None
This course provides an advanced in-depth study of selected topics in accounting using case studies and individual and group problem solving. Topics include cash flow, financial statement analysis, individual and group problem solving, practical approaches to dealing with clients, ethics, and critical thinking. Upon completion, students should be able to demonstrate competent analytical skills and effective communication of their analysis in written and/or oral presentations.

ACC 240 Governmental and Not-for-Profit Accounting 3 0 0 3
Prerequisites: ACC 121
Corequisites: None
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.

ACC 250 Adv Accounting 3 0 0 3
Prerequisites: ACC 220
Corequisites: None
This course is designed to analyze special accounting issues, which may include business combinations , partnerships, international accounting, estates, and trusts. Emphasis is placed on analyzing transactions and preparing working papers and financial statements. Upon completion, students should be able to solve a wide variety of problems by advanced application of accounting principles and procedures.

ACC 268 Information Systems and Internal Controls 3 0 0 3
Prerequisites: ACC 121
Corequisites: None
This course covers the design and operation of accounting information systems, with emphasis placed upon transaction cycles and the necessary controls for reliable data. Topics include accounting procedures; authorizing, documentation, and monitoring; flowcharting, data flow diagrams, and scheduling; and some auditing concepts. Upon completion, students should be able to demonstrate an analytical problem-solving ability and to communicate effectively their analysis in written or oral presentations.

ACC 269 Audit & Assurance Services 3 0 0 3
Prerequisites: ACC 220
Corequisites: None
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.

AIR CONDITIONING, HEATING, AND REFRIGERATION (AHR Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
AHR	**110**	**Introduction to Refrigeration**	2	6	0	5

Prerequisites: None
Corequisites: None
This course introduces the basic refrigeration process used in mechanical refrigeration and air conditioning systems. Topics include terminology, safety, and identification and function of components; refrigeration cycle; and tools and instrumentation used in mechanical refrigeration systems. Upon completion, students should be able to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade.

AHR 111 HVACR Electricity 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces electricity as it applies to HVACR equipment. Emphasis is placed on power sources, interaction of electrical components, wiring of simple circuits, and the use of electrical test equipment. Upon completion, students should be able to demonstrate good wiring practices and the ability to read simple wiring diagrams.

AHR 112 Heating Technology 2 4 0 4
Prerequisites: None
Corequisites: None
This course covers the fundamentals of heating including oil, gas, and electric heating systems. Topics include safety, tools and instrumentation, system operating characteristics, installation techniques, efficiency testing, electrical power, and control systems. Upon completion, students should be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system.

AHR 113 Comfort Cooling 2 4 0 4
Prerequisites: None
Corequisites: None
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.

AHR 114 Heat Pump Technology 2 4 0 4
Prerequisites: AHR 110 or AHR 113
Corequisites: None
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.

AHR 115 Refrigeration Systems 1 3 0 2
Prerequisites: AHR 110
Corequisites: None
This course introduces refrigeration systems and applications. Topics include defrost methods, safety and operational control, refrigerant piping, refrigerant recovery and charging, and leak testing. Upon completion, students should be able to assist in installing and testing refrigeration systems and perform simple repairs.

AHR 130 HVAC Controls 2 2 0 3
Prerequisites: AHR 111 or ELC 111
Corequisites: None
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.

AHR 133 HVAC Servicing 2 6 0 4
Prerequisites: None
Corequisites: AHR 112 or AHR 113
The course covers the maintenance and servicing of HVAC equipment. Topics include testing, adjusting, maintaining, and troubleshooting HVAC equipment and record keeping. Upon completion, students should be able to adjust, maintain, and service HVAC equipment.

AHR 151 HVAC Duct Systems I 1 3 0 2
Prerequisites: None
Corequisites: None
This course introduces the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work.

AHR 160 Refrigerant Certification 1 0 0 1
Prerequisites: None
Corequisites: None
This course covers the requirements for the EPA certification examinations. Topics include small appliances, high pressure systems, and low pressure systems. Upon completion, students should be able to demonstrate knowledge of refrigerants and be prepared for the EPA certification examinations.

AHR 180 HVACR Customer Relations 1 0 0 1
Prerequisites: None
Corequisites: None
This course introduces common business and customer relation practices that may be encountered in HVACR. Topics include business practices, appearance of self and vehicle, ways of handling customer complaints, invoices, telephone communications, and warranties. Upon completion, students should be able to present themselves to customers in a professional manner, understand how the business operates, complete invoices, and handle complaints.

AHR 210 Residential Building Code 1 2 0 2
Prerequisites: None
Corequisites: None
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.

AHR 211 Residential System Design 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system.

AHR 212 Advanced Comfort Systems 2 6 0 4
Prerequisites: AHR 114
Corequisites: None
This course covers water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pump systems including variable speed drives and controls. Emphasis is placed on the application, installation, and servicing of water-source systems and the mechanical and electronic control components of advanced comfort systems. Upon completion, students should be able to test, analyze, and troubleshoot water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pumps.

AHR 215 Commercial HVAC Controls 1 3 0 2
Prerequisites: AHR 111 or ELC 111 or ELC 112
Corequisites: None
This course introduces HVAC control systems used in commercial applications. Topics include electric/electronic control systems, pneumatic control systems, DDC temperature sensors, humidity sensors, pressure sensors, wiring, controllers, actuators, and controlled devices. Upon completion, students should be able to verify or correct the performance of common control systems with regard to sequence of operation and safety.

AHR 225 Commercial System Design 2 3 0 3
Prerequisites: AHR 211
Corequisites: None
This course covers the principles of designing heating and cooling systems for commercial buildings. Emphasis is placed on commercial heat loss/gain calculations, applied psychometrics, air-flow calculations, air distribution system design, and equipment selection. Upon completion, students should be able to calculate heat loss/gain, design and size air and water distribution systems, and select equipment.

AHR 240 Hydronic Heating 1 3 0 2
Prerequisites: AHR 112
Corequisites: None
This course covers the accepted procedures for proper design, installation, and balance of hydronic heating systems for residential or commercial buildings. Topics include heating equipment; pump, terminal unit, and accessory selection; piping system selection and design; and pipe sizing and troubleshooting. Upon completion, students should be able to assist with the proper design, installation, and balance of typical hydronic systems.

AHR 245 Chiller Systems 1 3 0 2
Prerequisites: AHR 110
Corequisites: None
This course introduces the fundamentals of liquid chilling equipment. Topics include characteristics of water, principles of water chilling, the chiller, the refrigerant, water and piping circuits, freeze prevention, purging, and equipment flexibility. Upon completion, students should be able to describe the components, controls, and overall operation of liquid chilling equipment and perform basic maintenance tasks.

AHR 250 HVAC System Diagnostics 0 4 0 2
Prerequisites: None
Corequisites: AHR 212
This course is a comprehensive study of air conditioning, heating, and refrigeration system diagnostics and corrective measures. Topics include advanced system analysis, measurement of operating efficiency, and inspection and correction of all major system components. Upon completion, students should be able to restore a residential or commercial AHR system so that it operates at or near manufacturers' specifications. This course also includes variable air volume box set-up, test and balance air and water systems.

AHR 263 Energy Management 1 3 0 2
Prerequisites: AHR 125 or AHR 215
Corequisites: None
This course covers building automation computer programming as currently used in energy management. Topics include night setback, duty cycling, synchronization, schedule optimization, and anticipatory temperature control. Upon completion, students should be able to write programs utilizing the above topics and connect computer systems to HVAC systems.

ANTHROPOLOGY (ANT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
ANT 210	**General Anthropology**	3	0	0	3

Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology.

ANT 220 Cultural Anthropology 3 0 0 3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed.

ANT 221 Comparative Cultures 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course provides an ethnographic survey of societies around the world covering their distinctive cultural characteristics and how these relate to cultural change. Emphasis is placed on the similarities and differences in social institutions such as family, economics, politics, education, and religion. Upon completion, students should be able to demonstrate knowledge of a variety of cultural adaptive strategies.

ANT 230 Physical Anthropology 3 0 0 3
Prerequisites: ENG 090, RED 090
Corequisites: ANT 230A
This course introduces the scientific study of human evolution. Emphasis is placed on evolutionary theory, population genetics, biocultural adaptation and human variation, as well as non-human primate evolution, morphology, and behavior. Upon completion, students should be able to demonstrate an understanding of the biological and cultural processes which have resulted in the formation of the human species.

ANT 230A Physical Anthropology Lab 0 2 0 1
Prerequisites: ENG 090, RED 090
Corequisites: ANT 230
This course provides laboratory work that reinforces the material presented in ANT 230. Emphasis is placed on laboratory exercises which may include fossil identification, genetic analysis, skeletal comparisons, forensics, computer simulations, and field observations. Upon completion, students should be able to demonstrate an understanding of the analytical skills employed by anthropologists in the study of primate evolution and variation.

ANT 240 Archaeology 3 0 0 3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the scientific study of the unwritten record of the human past. Emphasis is placed on the process of human cultural evolution as revealed through archaeological methods of excavation and interpretation. Upon completion, students should be able to demonstrate an understanding of how archaeologists reconstruct the past and describe the variety of past human cultures.

ANT 245 World Prehistory 3 0 0 3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides an introduction to the prehistory of the Old and New world. Emphasis is placed on archaeological evidence from origins of human culture to the beginning of recorded history. Upon completion, students should be able to demonstrate knowledge of the variability of ancient human societies and the development of agriculture and urbanism. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ARABIC (ARA Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
ARA 111	**Elementary Arabic I**	3	0	0	3

Prerequisites: ENG 090 or placement
Corequisites: ARA 181
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ARA 112 Elementary Arabic II 3 0 0 3
Prerequisites: ARA 111
Corequisites: ARA 182
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

ARA 181 Arabic Lab I 0 2 0 1
Prerequisites: ENG 090 or placement
Corequisites: ARA 111
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ARA 182 Arabic Lab II 0 2 0 1
Prerequisites: ARA 181
Corequisites: ARA 112
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ARA 211 Intermediate Arabic I 3 0 0 3
Prerequisites: ARA 112
Corequisites: None
This course includes communicative competencies in speaking, listening comprehension, reading and writing at an intermediate level with attention to cultural awareness. Emphasis is placed on intermediate skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should be able to demonstrate simple conversations and read works written in modern standard Arabic. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

ARA 212 Intermediate Arabic II 3 0 0 3
Prerequisites: ARA 211
Corequisites: None
This course provides continuation of communicative competence in speaking, listening comprehension, reading and writing at an intermediate level with attention to cultural awareness. Emphasis is placed on intermediate skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should be able to demonstrate an ability to conduct conversations and to read literary and non-fiction texts in modern standard Arabic. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

ARCHITECTURE (ARC Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
ARC 111	**Introduction to Architectural Technology**	1	6	0	3

Prerequisites: None
Corequisites: None
This course introduces basic architectural drafting techniques, lettering, use of architectural and engineer scales, and sketching. Topics include orthographic, axonometric, and oblique drawing techniques using architectural plans, elevations, sections, and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum architectural standards.

ARC 112 Constr Matls & Methods 3 2 0 4
Prerequisites: None
Corequisites: ARC 111
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.
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ARC 113 Residential Architectural Technology 1 6 0 3
Prerequisites: ARC 111, ARC 112
Corequisites: None
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.

ARC 114 Architectural CAD 1 3 0 2
Prerequisites: None
Corequisites: ARC 111 or LAR 111 and ARC 114A
This course introduces basic architectural CAD techniques. Topics include basic commands and system hardware and software. Upon completion, students should be able to prepare and plot architectural drawings to scale within accepted architectural standards.

ARC 114A Architectural CAD Lab 0 3 0 1
Prerequisites: None
Corequisites: ARC 114
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.

ARC 131 Building Codes 2 2 0 3
Prerequisites: ARC 112
Corequisites: None
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.

ARC 160 Residential Design 1 6 0 3
Prerequisites: ARC 111
Corequisites: ARC 112
This course introduces the methodology of basic residential design. Topics include residential site design, space organization and layout, residential styles, and the development of schematic design. Upon completion, students should be able to design a residence.

ARC 193 Selected Topics in Architecture Technology 1 4 0 3
Prerequisites: ARC 221
Corequisites: None
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ARC 211 Light Constr Technology 1 6 0 3
Prerequisites: ARC 111, ARC 113, ARC 114, and ARC 212
Corequisites: ARC 112
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.

ARC 212 Commercial Construction Technology 1 6 0 3
Prerequisites: ARC 111
Corequisites: ARC 112
This course introduces regional construction techniques for commercial plans, elevations, sections, and details. Topics include production of a set of commercial contract documents and other related topics. Upon completion, students should be able to prepare a set of working drawings in accordance with building codes.

ARC 213 Design Project 2 6 0 4
Prerequisites: ARC 111, ARC 112, ARC 113, ARC 114, and ARC 211
Corequisites: None
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.

ARC 214 Architectural Statics 3 0 0 3
Prerequisites: ARC 111, ARC 112, and MAT 121
Corequisites: None
This course covers the concepts of elementary statics as applied to architecture. Topics include forces, resultants, and types of force system; equations of equilibrium; reactions of simple architectural structures; internal forces in architectural roof trusses; frames and beams; centroids and moments of inertia as applied to architecture. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium as applied to architectural forms.

ARC 215 Architect Strength of Mat 3 0 0 3
Prerequisites: ARC 111, ARC 112, and MAT 121
Corequisites: None
This course covers the concepts of elementary strength of materials within architecture. Topics include structural form, architectural strength of materials, structural behavior, and the relationship between structures and architectural form. Upon completion, students should be able to size simple structural elements to specific architectural forms.

ARC 220 Advanced Architectural CAD 1 3 0 2
Prerequisites: ARC 114
Corequisites: None
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. This course is advanced CAD using AutoCAD software.

ARC 221 Architectural 3-D CAD 1 4 0 3
Prerequisites: ARC 114
Corequisites: None
This course introduces architectural three-dimensional CAD applications. Topics include three-dimensional drawing, coordinate systems, viewing, rendering, modeling, and output options. Upon completion, students should be able to prepare architectural three-dimensional drawings and renderings.

ARC 230 Environmental Systems 3 3 0 4
Prerequisites: ARC 111 and MAT 121, MAT 151, MAT 161, MAT 171, or MAT 175
Corequisites: None
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.

ARC 235 Architectural Portfolio 2 3 0 3
Prerequisites: LAR 223 or ARC 213
Corequisites: None
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.

ARC 240 Site Planning 2 2 0 3
Prerequisites: ARC 111 or LAR 111
Corequisites: None
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.

ARC 241 Contract Administration 1 2 0 2
Prerequisites: ARC 111 and ARC 112, or LAR 111 and LAR 112
Corequisites: None
This course covers the techniques for reviewing the progress of construction projects. Topics include site observations, field reports, applications for payment, change orders, and other related topics. Upon completion, students should be able to review construction progress and produce appropriate documentation.

ARC 250 Survey of Architecture 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the historical trends in architectural form. Topics include historical and current trends in architecture. Upon completion, students should be able to demonstrate an understanding of significant historical and current architectural styles.

ARC 261 Solar Technology 1 2 0 2
Prerequisites: ARC 111
Corequisites: None
This course introduces passive and active solar design theory and application. Topics include passive solar design, active solar theory, heat loss analysis, and other related topics. Upon completion, students should be able to design a passive solar system.

ARC 264 Digital Architecture 1 3 0 2
Prerequisites: None
Corequisites: ARC 213
This course covers multiple digital architectural techniques. Topics include spreadsheets and word processing procedures, on-line resources, modems, e-mail, image capture, multimedia, and other related topics. Upon completion, students should be able to transmit/receive electronic data, create multimedia presentations, and produce a desktop publishing document.

ARC 291 Selected Topics in Architectural Technology - - - 1
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Architectural Technology. Emphasis is placed on subject matter appropriate to architectural technologies. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ARC 292 Selected Topics in Architectural Technology - - - 2
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Architectural Technology. Emphasis is placed on subject matter appropriate to architectural technologies. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ARC 293A Selected Topics in Architecture 2 2 0 3
Prerequisites: ARC 261 or LAR 120 or DES 235
Corequisites: None
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on the subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study. Students should be able to submit to a Green Building Design Competition.

ART (ART Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ART	**111**	**Art Appreciation**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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.

ART	**113**	**Art Methods and Materials**	2	2	0	3

Prerequisites: None
Corequisites: None
This course provides an overview of media and techniques. Emphasis is placed on exploration and manipulation of materials. Upon completion, students should be able to demonstrate familiarity with a variety of methods, materials, and processes.

ART	**114**	**Art History Survey I**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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.

ART	**115**	**Art History Survey II**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course covers the development of art forms from the Renaissance to the present. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development.

ART	**116**	**Survey of American Art**	3	0	0	3

Prerequisites: RED 090, ENG 090, or placement
Corequisites: None
This course covers the development of American art forms from colonial times to the present. Emphasis is placed on architecture, painting, sculpture, graphics, and the decorative arts. Upon completion, students should be able to demonstrate understanding of the history of the American creative experience.

ART	**117**	**Non-Western Art History**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course introduces non-Western cultural perspectives. Emphasis is placed on, but not limited to, African, Oriental, and Oceanic art forms throughout history. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of non-Western social and cultural development.

ART	**121**	**Design I**	0	6	0	3

Prerequisites: None
Corequisites: None
This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art.

ART	**130**	**Basic Drawing**	0	4	0	2

Prerequisites: None
Corequisites: None
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.

ART	**131**	**Drawing I**	0	6	0	3

Prerequisites: None
Corequisites: None
This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ART	**132**	**Drawing II**	0	6	0	3

Prerequisites: ART 131
Corequisites: None
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.

ART 140 Basic Painting 0 4 0 2
Prerequisites: None
Corequisites: None
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.

ART 214 Portfolio and Resume 0 2 0 1
Prerequisites: RED 090 and ENG 090
Corequisites: None
This course covers résumé writing, interview skills, and the preparation and presentation of an art portfolio. Emphasis is placed on the preparation of a portfolio of original artwork, the preparation of a photographic portfolio, approaches to résumé writing, and interview techniques. Upon completion, students should be able to mount original art for portfolio presentation, photograph and display a professional slide portfolio, and write an effective résumé. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ART 231 Printmaking I 0 6 0 3
Prerequisites: RED 090 and ENG 090
Corequisites: None
This course introduces printmaking: its history, development techniques, and processes. Emphasis is placed on basic applications with investigation into image source and development. Upon completion, students should be able to produce printed images utilizing a variety of methods. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ART 240 Painting I 0 6 0 3
Prerequisites: None
Corequisites: None
This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form.

ART 244 Watercolor 0 6 0 3
Prerequisites: ENG 080 and RED 080
Corequisites: None
This course introduces basic methods and techniques used in watercolor. Emphasis is placed on application, materials, content, and individual expression. Upon completion, students should be able to demonstrate a variety of traditional and nontraditional concepts used in watercolor media.

ART 260 Photography Appreciation 3 0 0 3
Prerequisites: RED 090, ENG 090
Corequisites: None
This course introduces the origins and historical development of photography. Emphasis is placed on the study of composition and history of photography as an art form. Upon completion, students should be able to recognize and produce, using color transparencies, properly exposed, well-composed photographs. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ART 281 Sculpture I 0 6 0 3
Prerequisites: None
Corequisites: None
This course provides an exploration of the creative and technical methods of sculpture with focus on the traditional processes. Emphasis is placed on developing basic skills as they pertain to three-dimensional expression in various media. Upon completion, students should be able to show competence in variety of sculptural approaches.

ART 282 Sculpture II 0 6 0 3
Prerequisites: ART 281
Corequisites: None
This course builds on the visual and technical skills learned in ART 281. Emphasis is placed on developing original solutions to sculptural problems in a variety of media. Upon completion, students should be able to express individual ideas using the techniques and materials of sculpture. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ART 288 Studio 0 6 0 3
Prerequisites: RED 090 and ENG 090
Corequisites: None
This course provides the opportunity for advanced self-determined work beyond the limits of regular studio course sequences. Emphasis is placed on creative self-expression and in-depth exploration of techniques and materials. Upon completion, students should be able to create original projects specific to media, materials, and techniques. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

ASTRONOMY (AST Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
AST	**111**	**Descriptive Astronomy**	3	0	0	3

Prerequisites: MAT 161 or MAT 171
Corequisites: AST 111A
This course introduces an overall view of modern astronomy. Topics include an overview of the solar system, the sun, stars, galaxies, and the larger universe. Upon completion, students should be able to demonstrate an understanding of the universe around them.

AST	**111A**	**Descriptive Astronomy Lab**	0	2	0	1

Prerequisites: MAT 161 or MAT 171
Corequisites: AST 111
The course is a laboratory to accompany AST 111. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 111 and which provide practical experience. Upon completion, students should be able to demonstrate an understanding of the universe around them.

AST	**151**	**General Astronomy I**	3	0	0	3

Prerequisites: MAT 161 or MAT 171
Corequisites: AST 151A
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.

AST	**151A**	**General Astronomy I Lab**	0	2	0	1

Prerequisites: MAT 161 or MAT 171
Corequisites: AST 151
The course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

AST	**152**	**General Astronomy II**	3	0	0	3

Prerequisites: AST 151
Corequisites: AST 152A
This course is a continuation of AST 151 with primary emphasis beyond the solar system. Topics include the sun, stars, galaxies, and the larger universe, including cosmology. Upon completion, students should be able to demonstrate a working knowledge of astronomy.

AST	**152A**	**General Astronomy II Lab**	0	2	0	1

Prerequisites: AST 151
Corequisites: AST 152
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.

AUTOMATION AND ROBOTICS (ATR Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ATR	**112**	**Introduction to Automation**	2	3	0	3

Prerequisites: None
Corequisites: None
This course introduces the basic principles of automated manufacturing and describes the tasks that technicians perform on the job. Topics include the history, development, and current applications of robots and automated systems including their configuration, operation, components, and controls. Upon completion, students should be able to understand the basic concepts of automation and robotic systems.

ATR	**211**	**Robot Programming**	2	3	0	3

Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course provides the operational characteristics of industrial robots and programming in their respective languages. Topics include robot programming utilizing teach pendants, PLCs, and personal computers; and the interaction of external sensors, machine vision, network systems, and other related devices. Upon completion, students should be able to program and demonstrate the operation of various robots.

ATR	**213**	**Programmable Controllers**	3	3	0	4

Prerequisites: ELC 131
Corequisites: None
This course provides a detailed study of the PLC, related hardware and programming format, and applications in the automated work cell. Topics include input/output modules, power supplies, operator interface, ladder logic, and Boolean language programming. Upon completion, students should be able to install, program, and maintain PLC-controlled systems.

ATR 214 Advanced PLCs 3 3 0 4
Prerequisites: ELC 128
Corequisites: None
This course introduces the study of high-level programming languages and advanced I/O modules. Topics include advanced programming languages; system networking; computer interfacing; analog and other intelligent I/O modules; and system troubleshooting. Upon completion, students should be able to write and troubleshoot systems using high-level languages and complex I/O modules.

ATR 215 Sensors and Transducers 2 3 0 3
Prerequisites: ELN 131
Corequisites: None
This course provides the theory and application of sensors typically found in an automated manufacturing system. Topics include physical properties, operating range, and other characteristics of numerous sensors and transducers used to detect temperature, pressure, position, and other desired physical parameters. Upon completion, students should be able to properly interface a sensor to a PLC, PC, or process control system.

ATR 218 Computer Integrated Manufacturing 2 3 0 3
Prerequisites: ATR 211
Corequisites: None
This course introduces high technology systems which are currently being used in new automated manufacturing facilities. Topics include integration of robots and work cell components, switches, proxies, vision and photoelectric sensors, with automated control and data gathering systems. Upon completion, students should be able to install, program, and troubleshoot an automated manufacturing cell and its associated data communications systems.

ATR 219 Automated Systems Troubleshooting 1 3 0 2
Prerequisites: ATR 213
Corequisites: None
This course introduces troubleshooting procedures used in automated systems. Topics include logical fault isolation, diagnostic software usage, component replacement techniques, and calibration; safety of equipment; and protection of equipment while troubleshooting. Upon completion, students should be able to analyze and troubleshoot an automated system.

AUTOMOTIVE (AUT Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
AUT	**114**	**Safety and Emissions**	1	2	0	2

Prerequisites: AUT 141, AUT 141A, AUT 151, AUT 151A
Corequisites: None
This course covers the laws, procedures, and specifications needed to perform a North Carolina State Safety and Emissions inspection. Topics include brake, steering and suspension, lighting, horn, windshield wiper, tire, mirrors, and emission control devices inspection. Upon completion, students should be able to perform complete and thorough North Carolina State Safety and Emissions inspections.

AUT 116 Engine Repair 2 3 0 3
Prerequisites: None
Corequisites: AUT 116A, AUT 123
This course covers the theory, construction, inspection, diagnosis, and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.

AUT 116A Engine Repair Lab 0 3 0 1
Prerequisites: None
Corequisites: AUT 116
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.

AUT 123 Powertrain Diagn & Serv 1 3 0 2
Prerequisites: None
Corequisites: AUT 116, AUT 116A
This course covers the diagnosis, repair and service of the vehicle powertrain and related systems. Topics include fundamental operating principles of engines and transmissions and use of proper service procedures for diagnosis, service and removal and replacement of major components. Upon completion, students should be able to perform basic service and diagnosis of the powertrain and related systems, and to perform in vehicle repairs and remove and replace components.

AUT 141 Suspension & Steering Sys 2 3 0 3
Prerequisites: AUT 161A
Corequisites: AUT 141A, AUT 151, AUT 151A
This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

AUT 141A Suspension & Steering Lab 0 3 0 1
Prerequisites: None
Corequisites: AUT 141
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.

AUT 151 Brake Systems 2 3 0 3
Prerequisites: AUT 161A
Corequisites: AUT 141, AUT 141A, AUT 151A
This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydra-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

AUT 151A Brakes Systems Lab 0 3 0 1
Prerequisites: None
Corequisites: AUT 151
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.

AUT 161 Basic Auto Electricity 4 3 0 5
Prerequisites: None
Corequisites: None
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.

AUT 161A Basic Auto Electricity Part 1 3 0 0 3
Prerequisites: None
Corequisites: None
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. This is part one of a two-part course.

AUT 161B Basic Auto Electricity Part 2 1 3 0 2
Prerequisites: AUT 161A
Corequisites: AUT 163, AUT 163A, AUT 181
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. This is part two of a two-part course.

AUT 163 Adv Auto Electricity 2 3 0 3
Prerequisites: AUT 161
Corequisites: AUT 163A, AUT 181
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.

AUT 163A Adv Auto Electricity Lab 0 3 0 1
Prerequisites: None
Corequisites: AUT 163
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.

AUT 171 Auto Climate Control 2 4 0 4
Prerequisites: AUT 161 or (AUT 161A and AUT 161B)
Corequisites: None
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis/repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.

AUT 181 Engine Performance 1 2 3 0 3
Prerequisites: AUT 161A
Corequisites: AUT 161B, AUT 163, AUT 163A
This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information.

AUT 183 Engine Performance 2 2 6 0 4
Prerequisites: AUT 181, AUT 141, AUT 141A, AUT 151, AUT 151A, AUT 281
Corequisites: AUT 221, AUT 221A
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.

AUT 213 Automotive Servicing 2 1 3 0 2
Prerequisites: AUT 116, AUT 116A, AUT 123, AUT 161A
Corequisites: AUT 181
This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment.

AUT 221 Auto Transm/Transaxles 2 3 0 3
Prerequisites: AUT 141, AUT 141A, AUT 151, AUT 151A
Corequisites: AUT 183, AUT 221A
This course covers operation, diagnosis, service, and repair of automatic transmissions/transaxles. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair automatic drive trains.

AUT 221A Auto Transm/Transax Lab 0 3 0 1
Prerequisites: None
Corequisites: AUT 221
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.

AUT 231 Man Trans/Axles/Drtrains 2 3 0 3
Prerequisites: None
Corequisites: AUT 231A
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.

AUT 231A Man Trans/Ax/Drtrains Lab 0 3 0 1
Prerequisites: None
Corequisites: AUT 231
This course is an optional lab for the program that needs to meet the 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, student should be able to diagnose and repair manual drive trains.

AUT 281 Adv Engine Performance 2 2 0 3
Prerequisites: AUT 161A, AUT 161B, AUT 163, AUT 163A, AUT 181
Corequisites: None
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.

BAKING AND FINANCE (BAF Prefix)

	Class	Lab	Clin/ WExp	Credit Hours
BAF 143 Financial Planning	3	0	0	3

Prerequisites: None
Corequisites: None
This course covers the perspectives, principles, and practices of financial planning. Topics include investment, retirement, tax, and estate planning. Upon completion, students should be able to understand the process that looks at a customer's financial picture and recommend strategies to achieve the customer's objectives.

BAF 235 Analyzing Financial Statements 3 0 0 3
Prerequisites: ACC 120
Corequisites: None
This course provides practice in constructing and analyzing long-range, multiple-year forecasts of income statements and balance sheets, and cash budgets. Topics include trend, ratio, common size, comparative analysis, programs, projections, and cash budgets. Upon completion, students should be able to analyze income statements, balance sheets, and *pro forma* statements.

BIOLOGY (BIO Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
BIO 094	**Concepts of Human Biology**	3	2	0	4

Prerequisites: None
Corequisites: RED 090
This course focuses on fundamental concepts of human biology. Topics include terminology, biochemistry, cell biology, tissues, body systems, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level anatomy and physiology courses.

BIO 106 Introduction to Anatomy/Physiology/Microbiology 2 2 0 3
Prerequisites: None
Corequisites: None
This course covers the fundamental and principle concepts of human anatomy and physiology and microbiology. Topics include an introduction to the structure and function of cells, tissues, and human organ systems, and an overview of microbiology, epidemiology, and control of microorganisms. Upon completion, students should be able to identify structures and functions of the human body and describe microorganisms and their significance in health and disease.

BIO 110 Principles of Biology 3 3 0 4
Prerequisites MAT 070, ENG 090, RED 090 or MAT 070, ENG 111
Corequisites: None
This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, taxonomy, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

BIO 111 General Biology I 3 3 0 4
Prerequisites ENG 090, MAT 070, RED 090, or placement
Corequisites: None
This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. This course is the first in a two-semester series intended for science majors.

BIO 112 General Biology II 3 3 0 4
Prerequisites: A grade of "C" or better in BIO 111
Corequisites: None
This course is a continuation of BIO 111. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. This course is the second in a two-semester series intended for science majors.

BIO 120 Introductory Botany 3 3 0 4
Prerequisites: BIO 110 or BIO 111
Corequisites: None
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. Laboratory exercises are correlated with lecture topics.

BIO 130 Introductory Zoology 3 3 0 4
Prerequisites: BIO 110 or BIO 111
Corequisites: None
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. The evolutionary relatedness of the organisms studied will be emphasized.

BIO 140 Environmental Biology 3 0 0 3
Prerequisites: A grade of "C" or better in BIO 110 or BIO 111
Corequisites: BIO 140A
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 inter-relationships and of contemporary environmental issues. Individual action as part of the solution to regional environmental problems is stressed.

BIO 140A Environmental Biology Lab 0 3 0 1
Prerequisites: A grade of "C" or better in BIO 110 or BIO 111
Corequisites: BIO 140
This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues. Environmentally responsible behavior at the individual level is investigated.

BIO 145 Ecology 3 3 0 4
Prerequisites: BIO 110 or BIO 111
Corequisites: None
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. The laboratory component of this course provides an introduction to basic field techniques used in modern ecological research.

BIO 150 Genetics in Human Affairs 3 0 0 3
Prerequisites: BIO 110 or BIO 111
Corequisites: None
This course describes the importance of genetics in everyday life. Topics include the role of genetics in human development, birth defects, cancer and chemical exposure, and current issues including genetic engineering and fertilization methods. Upon completion, students should be able to understand the relationship of genetics to society today and its possible influence on our future. Through the analysis of current topics in genetics, students will develop skills in reading scientific articles and in compiling information into written and oral communications.

BIO 155 Nutrition 3 0 0 3
Prerequisites: CHM 090 or equivalent
Corequisites: None
This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups.

BIO 160 Introductory Life Sciences 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces scientific and biological concepts. Topics include basic chemistry, cell structure and function, cell division, basic genetic concepts, anatomical terminology, and metric-English measurements and conversions. Upon completion, students should be able to demonstrate an understanding of basic chemistry, cell biology, genetic concepts; anatomical terminology; and metric-English measurements and conversions.

BIO 161 Introduction to Human Biology 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides a basic survey of human biology. Emphasis is placed on the basic structure and function of body systems and the medical terminology used to describe normal and pathological states. Upon completion, students should be able to demonstrate an understanding of normal anatomy and physiology and the appropriate use of medical terminology.

BIO 163 Basic Anatomy and Physiology 4 2 0 5
Prerequisites: CHM 090 or equivalent
Corequisites: None
This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships.

BIO 165 Anatomy and Physiology I 3 3 0 4
Prerequisites: CHM 090
Corequisites: None
This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

BIO 166 Anatomy and Physiology II 3 3 0 4
Prerequisites: BIO 165
Corequisites: None
This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems.

BIO 168 Anatomy and Physiology I 3 3 0 4
Prerequisites: Take one set: Set One: ENG 090, RED 090 and CHM 090 or CHM 092 or CHM 130 or BIO 111
Set 2: ENG 111 and CHM 090 or CHM 092 or CHM 130 or BIO 111
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

BIO 169 Anatomy and Physiology II 3 3 0 4
Prerequisites: A grade of "C" or better in BIO 168
Corequisites: None
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 nterrelationships. Laboratory exercises will include investigation of structural and functional aspects of the indicated organ systems.

BIO 175 General Microbiology 2 2 0 3
Prerequisites: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

BIO 180 Biological Chemistry 2 2 0 3
Prerequisites: BIO 110 or BIO 111
Corequisites: None
This course provides an introduction to basic biochemical processes in living systems. Topics include properties of carbohydrates, lipids, proteins, nucleic acids, vitamins, and buffers, with emphasis on biosynthesis, degradation, function, and equilibrium. Upon completion, students should be able to demonstrate an understanding of fundamental biochemical concepts. Laboratory exercises will complement the basic principles presented in lecture.

BIO 230 Entomology 3 3 0 4
Prerequisites: BIO 112
Corequisites: None
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.

BIO 231 Invertebrate Zoology 3 3 0 4
Prerequisites: BIO 112
Corequisites: None
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. Modern evolutionary theory is used to interpret the relationships among the organisms studied in this course.

BIO 232 Vertebrate Zoology 3 3 0 4
Prerequisites: BIO 112
Corequisites: None
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. Local species are emphasized in the laboratory component of this course.

BIO 242 Natural Resources Conservation 3 0 0 3
Prerequisites: BIO 112
Corequisites: None
This course describes the importance of natural resources and their role in our environment. Emphasis is placed on the physical, biological, and ecological principles underlying natural resource conservation with attention to the biological consequences of human impacts. Upon completion, students should be able to demonstrate an understanding of natural resource conservation. Local environmental issues dealing with resource conservation are emphasized.

BIO 243 Marine Biology 3 3 0 4
Prerequisites: BIO 110 or BIO 111
Corequisites: None
This course covers the physical and biological components of the marine environment. Topics include major habitats, the diversity of organisms, their biology and ecology, marine productivity, and the use of marine resources by humans. Upon completion, students should be able to identify various marine habitats and organisms and to demonstrate a knowledge of their biology and ecology.

BIO 250 Genetics 3 3 0 4
Prerequisites: BIO 112
Corequisites: None
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.

BIO 271 Pathophysiology 3 0 0 3
Prerequisites: BIO 163 or BIO 166
Corequisites: None
This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is placed on interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate a detailed knowledge of pathophysiology.

BIO 275 Microbiology 3 3 0 4
Prerequisites: A grade of "C" or better in BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168
Corequisites: None
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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

BAKING AND PASTRY ARTS (BPA Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
BPA 120	**Petit Fours & Pastries**	1	4	0	3

Prerequisites: CUL 110, CUL 160, and BPA 210
Corequisites: None
This course introduces the basic principles of the preparation of petit fours and individual dessert pastries. Emphasis is placed on traditional and contemporary petit fours and pastries, utilizing updated production methods. Upon completion, students should be able to produce individual pastries and petit fours for buffet and special event settings.

BPA 130 European Cakes and Tortes 1 4 0 3
Prerequisites: CUL 110, CUL 160, and BPA 210
Corequisites: None
This course introduces the production of a wide variety of classical and modern cakes suitable for restaurants, retail shops and large-scale production. Emphasis is placed on classic cakes using the methods of mixing, filling, glazing and icing. Upon completion, students should be able to prepare, assemble, and decorate gelatin-based and layered tortes and cakes such as Bavarian, Dobos, and Sacher.

BPA 150 Artisan & Specialty Bread 1 6 0 4
Prerequisites: CUL 110, CUL 140, and CUL 160
Corequisites: None
This course provides an advanced study in the art and craft of bread making. Topics include pertinent formulas and techniques associated with naturally leavened loaves, hearth breads, focaccia, flat breads, and other breads utilizing a variety of grains. Upon completion, students should be able to prepare artisan and specialty breads that meet or exceed the expectations of restaurant and retail publics.

BPA 210 Cake Design & Decorating 1 4 0 3
Prerequisites: CUL 110, CUL 140 and CUL 160
Corequisites: None
This course covers advanced concepts in the design and decoration of wedding cakes and other specialty cakes. Topics include baking, filling, and assembling cakes; cake design; finishing techniques utilizing gum paste, fondant, and royal icing; and advanced piping skills. Upon completion, students should be able to design, create, finish and evaluate the quality of wedding and specialty cakes.

BPA 220 Confection Artistry 1 6 0 4
Prerequisites: BPA 150, BPA 210, CUL 110, and CUL 160
Corequisites: None
This course introduces the principles and techniques of decorative sugar work and confectionary candy. Topics include nougat, marzipan modeling, pastillage and cocoa painting, confection candy and a variety of sugar techniques including blown, spun, poured and pulled. Upon completion, students should be able to prepare edible centerpieces and confections to enhance dessert buffets and plate presentations.

BPA 230 Chocolate Artistry 1 4 0 3
Prerequisites: CUL 110, CUL 160
Corequisites: BPA 150, BPA 210
This course provides a study in the art and craft of chocolate. Topics include chocolate tempering, piping, molding; decorative work associated with cakes and centerpieces; and the candy production techniques of filling enrobing and dipping. Upon completion, students should be able to properly temper chocolate, produce a variety of chocolate candies and decorative elements for garnishing.

BPA 230A Chocolate Artistry Lab 0 2 0 1
Prerequisites: CUL 110 and CUL 160
Corequisites: BPA 230
This course provides a laboratory experience for enhancing student skills in the art and craft of chocolate. Emphasis is placed on chocolate tempering, piping, and molding; decorative work associated with cakes and centerpieces; and candy production techniques of filling, enrobing and dipping. Upon completion, students should be able to demonstrate a basic proficiency in the preparation of decorative chocolate centerpieces, garnishes and candies.

BPA 240 Plated Desserts 1 4 0 3
Prerequisites: CUL 110, CUL 160, and BPA 130
Corequisites: None
This course provides a study in the elements and principles of design as it relates to plated desserts. Topics include plate composition, portioning, flavor combinations, textures, eye appeal, balance, color harmony and plate decorating techniques such as stenciling, chocolate striping, and plate painting. Upon completion, students should be able to demonstrate competence in combining a variety of dessert components enhanced with plate decorating techniques.

BPA 250 Dessert/Bread Production 1 8 0 5
Prerequisites: BPA 130, BPA 150, and BPA 210
Corequisites: None
This course is designed to merge artistry and innovation with the practical baking and pastry techniques utilized in a production setting. Emphasis is placed on quantity bread and roll-in dough production, plated and platter presentations, seasonal/theme product utilization and cost effectiveness. Upon completion, students should be able to plan, prepare and evaluate breads and desserts within a commercial environment and determine production costs and selling prices.

BPA 260 Pastry & Baking Marketing 2 2 0 3
Prerequisites: BPA 150 and BPA 210
Corequisites: BPA 220, BPA 230, and BPA 250
This course is designed to cover the marketing concepts and merchandising trends utilized in bakery and pastry operations. Emphasis is placed on menu planning, pricing products/strategies, resale and wholesale distribution methods, legal implications, and advertising techniques. Upon completion, students should be able to create a marketing plan that will serve as a basis for a capstone experience.

BLUEPRINT READING (BPR Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
BPR 111	**Blueprint Reading**	1	2	0	2

Prerequisites: None
Corequisites: None
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.

BPR 130 Blueprint Reading/Construction 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the interpretation of blueprints and specifications that are associated with the construction trades. Emphasis is placed on interpretation of details for foundations, floor plans, elevations, and schedules. Upon completion, students should be able to read and interpret a set of construction blueprints.

BPR 230 Commercial Blueprints 1 2 0 2
Prerequisites: BPR 130
Corequisites: None
This course covers blueprints specific to commercial structures and requires basic blueprint reading skills and/or a commercial construction background. Topics include site, structural, mechanical, electrical, and plumbing blueprints and specifications. Upon completion, student should be able to interpret commercial blueprints and specifications.

BUSINESS (BUS Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
BUS 110	**Introduction to Business**	3	0	0	3

Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

BUS 115 Business Law I 3 0 0 3
Prerequisites: None
Corequisites: None
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.

BUS 116 Business Law II 3 0 0 3
Prerequisites: BUS 115
Corequisites: None
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.

BUS 121 Business Math 2 2 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

BUS 125 Personal Finance 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides a study of individual and family financial decisions. Emphasis is placed on building useful skills in buying, managing finances, increasing resources, and coping with current economic conditions. Upon completion, students should be able to develop a personal financial plan.

BUS 137 Principles of Management 3 0 0 3
Prerequisites: None
Corequisites: None
This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management.

BUS 139 Entrepreneurship 3 0 0 3
Prerequisites: BUS 110
Corequisites: None
This course provides an introduction to the principles of entrepreneurship. Topics include self-analysis of entrepreneurship readiness, the role of the entrepreneur in economic development, legal problems, organizational structure, sources of financing, budgeting, and cash flow. Upon completion, student should have an understanding of the entrepreneurial process and issues faced by entrepreneurs.

BUS 147 Business Insurance 3 0 0 3
Prerequisites: None
Corequisites: None
This course surveys the basic concepts of risk management. Topics include principles and applications of health, property, life, and casualty insurance. Upon completion, students should be able to evaluate different insurance needs and assist an organization in acquiring adequate insurance coverage.

BUS 148 Survey of Real Estate 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces real estate principles and practices. Topics include real estate finance, real estate law, brokerage, land use planning, property management, and valuation. Upon completion, students should be able to explain basic procedures involved in the lease, purchase, and sale of real property.

BUS 151 People Skills 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the basic concepts of identity and communication in the business setting. Topics include self-concept, values, communication styles, feelings and emotions, roles versus relationships, and basic assertiveness, listening, and conflict resolution. Upon completion, students should be able to distinguish between unhealthy, self-destructive, communication patterns and healthy, non-destructive, positive communication patterns.

BUS 153 Human Resource Management 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns.

BUS 193 Selected Topics in Business Administration - - - 3
Prerequisites: BUS 137
Corequisites: None
This course provides an opportunity to explore areas of current interest in business topics. Emphasis is placed on subject matter appropriate to business. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

BUS 217 Employment Law and Regulations 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the principle laws and regulations affecting public and private organizations and their employees or prospective employees. Topics include fair employment practices, EEO, affirmative action, and employee rights and protections. Upon completion, students should be able to evaluate organization policy for compliance and assure that decisions are not contrary to law.

BUS 225 Business Finance 2 2 0 3
Prerequisites: ACC 120
Corequisites: None
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.

BUS 228 Business Statistics 2 2 0 3
Prerequisites: MAT 115, MAT 140, or MAT 161
Corequisites: None
This course introduces the use of statistical methods and tools in evaluating research data for business applications. Emphasis is placed on basic probability, measures of spread and dispersion, central tendency, sampling, regression analysis, and inductive inference. Upon completion, students should be able to apply statistical problem solving to business.

BUS 230 Small Business Management 3 0 0 3
Prerequisites: MTH 110
Corequisites: MTH 120
This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan.

BUS 234 Training and Development 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers developing, conducting, and evaluating employee training with attention to adult learning principles. Emphasis is placed on conducting a needs assessment, using various instructional approaches, designing the learning environment, and locating learning resources. Upon completion, students should be able to design, conduct, and evaluate a training program. *This course is also available through the Virtual Learning Community (VLC).*

BUS 245 Entrepreneurship II 3 0 0 3
Prerequisites: BUS 139
Corequisites: None
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.

BUS 256 Recruitment, Selection, and Personnel Planning 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the basic principles involved in managing the employment process. Topics include personnel planning, recruiting, interviewing and screening techniques, maintaining employee records; and voluntary and involuntary separations. Upon completion, students should be able to acquire and retain employees who match position requirements and fulfill organizational objectives.

BUS 258 Compensation and Benefits 3 0 0 3
Prerequisites: None
Corequisites: None
This course is designed to study the basic concepts of pay and its role in rewarding performance. Topics include wage and salary surveys, job analysis, job evaluation techniques, benefits, and pay-for-performance programs. Upon completion, students should be able to develop and manage a basic compensation system to attract, motivate, and retain employees.

BUS 259 HRM Applications 3 0 0 3
Prerequisites: BUS 217, BUS 234, BUS 256, and BUS 258
Corequisites: None
This course provides students in the Human Resource Management concentration the opportunity to reinforce their learning experiences from preceding HRM courses. Emphasis is placed on application of day-to-day HRM functions by completing in-basket exercises and through simulations. Upon completion, students should be able to determine the appropriate actions called for by typical events that affect the status of people at work. *This course is a unique concentration requirement of the Human Resources Management concentration in the Business Administration program. This course is also available through the Virtual Learning Community (VLC).*

BUS 260 Business Communication 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
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.

BUS 280 REAL Small Business 4 0 0 4
Prerequisites: None
Corequisites: None
This course introduces hands-on techniques and procedures for planning and opening a small business, including the personal qualities needed for entrepreneurship. Emphasis is placed on market research, finance, time management, and day-to-day activities of owning/operating a small business. Upon completion, students should be able to write and implement a viable business plan and seek funding.

COMPUTED TOMOGRAPHY (CAT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
CAT 210	**CT Physics and Equipment**	3	0	0	3

Prerequisites: None
Corequisites: None
This course covers the system operations and components, image processing and display, image quality, and artifacts in computed tomography. Emphasis is placed on the data acquisition components, tissue attenuation conversions, image manipulation, and factors controlling image resolution. Upon completion, students should be able to understand the physics and instrumentation used in computed tomography.

CAT 211 CT Procedures 4 0 0 4
Prerequisites: None
Corequisites: CAT 210
This course is designed to cover specialized patient care, cross-sectional anatomy, contrast media, and scanning procedures in computed tomography. Emphasis is placed on patient assessment and monitoring, contrast agents' use, radiation safety, methods of data acquisition, and identification of cross-sectional anatomy. Upon completion, students should be able to integrate all facets of the imaging procedures in computed tomography.

CAT 223 CT Clinical Practicum 0 0 9 3
Prerequisites: None
Corequisites: None
This course provides the opportunity to apply knowledge gained from classroom instruction to the computed tomography clinical setting. Emphasis is placed on patient care and positioning, scanning procedures, and image production in computed tomography. Upon completion, students should be able to assume a variety of duties and responsibilities within the computed tomography clinical environment.

CAT 225 CT Clinical Practicum 0 0 15 5
Prerequisites: None
Corequisites: None
This course provides the opportunity to apply knowledge gained from classroom instruction to the computed tomography clinical setting. Emphasis is placed on patient care and positioning, scanning procedures, and image production in computed tomography. Upon completion, students should be able to assume a variety of duties and responsibilities within the computed tomography clinical environment.

CAT 261 CT Exam Prep 1 0 0 1
Prerequisites: None
Corequisites: None
This course is a review of the components specific to CT imaging technology as practiced in didactic and clinical settings. Emphasis is placed on content specifications of the ARRT post primary certification in CT. Upon completion, students should be able to demonstrate an understanding of the topics presented for successful completion of the ARRT post-primary certification exam.

CYBER CRIME TECHNOLOGY (CCT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
CCT 121	**Computer Crime Invest**	3	2	0	4

Prerequisites: None
Corequisites: None
This course introduces the fundamental principles of computer crime investigation processes. Topics include crime scene/ incident processing, information gathering techniques, data retrieval, collection and preservation of evidence, preparation of reports and court presentations. Upon completion, students should be able to identify cyber crime activity and demonstrate proper investigative techniques to process the scene and assist in case prosecution.

CCT 240 Data Recovery Techniques 2 3 0 3
Prerequisites: None
Corequisites: None
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.

COMPUTER ENGINEERING TECHNOLOGY (CET Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
CET	**111**	**Computer Upgrade/Repair I**	2	3	0	3

Prerequisites: None
Corequisites: None
This course is the first of two courses covering repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics include safety practices, CPU/memory/bus identifi-cation, disk subsystem, 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.

CET	**193A**	**Selected Topics in LabView**	2	3	0	3

Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Engineering Technology. Emphasis is placed on the use of LabVIEW. Upon completion, students should be able to demonstrate an understanding of the use of this simulation software.

CET	**211**	**Computer Upgrade/Repair II**	2	3	0	3

Prerequisites: CET 111
Corequisites: None
This course is the second of two courses covering repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics 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.

CET	**222**	**Computer Architecture**	2	0	0	2

Prerequisites: None
Corequisites: None
This course introduces the organization and design philosophy of computer systems with respect to resource management, throughput, and operating system interaction. Topics include instruction sets, registers, data types, memory management, virtual memory, cache, storage management, multi-processing, and pipelining. Upon completion, students should be able to evaluate system hardware and resources for installation and configuration purposes.

CET	**225**	**Digital Signal Processing**	2	2	0	3

Prerequisites: None
Corequisites: None
This course covers the theory and use of digital signal processing techniques. Topics include Fourier analysis, digital filtering, Z transforms, IIR, FIR, convolution, pulse methods, and DSP programming. Upon completion, students should be able to implement and troubleshoot DSP systems in hardware and software.

CET	**251**	**Software Engineering Principles**	3	3	0	4

Prerequisites: CSC 133 or CSC 134
Corequisites: None
This course introduces the methodology used to manage the development process for complex software systems. Topics include the software life cycle, resource allocation, team dynamics, design techniques, and tools that support these activities. Upon completion, students should be able to design and build robust software in a team setting.

CHEMISTRY (CHM Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
CHM	**090**	**Chemistry Concepts**	4	0	0	4

Prerequisites: ENG 090, MAT 070, RED 090
Corequisites: None
This course provides a non-laboratory based introduction to basic concepts of chemistry. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts necessary for success in college-level science courses.

CHM	**092**	**Fundamentals of Chemistry**	3	2	0	4

Prerequisites: ENG 090, MAT 070, RED 090
Corequisites: None
This course covers fundamentals of chemistry with laboratory applications. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts and demonstrate basic laboratory skills necessary for success in college-level science courses.

CHM 130 General, Organic, and Biochemistry 3 0 0 3
Prerequisites: ENG 090, MAT 070, RED 090
Corequisites: None
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.

CHM 131 Introduction to Chemistry 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

CHM 131A Introduction to Chemistry Lab 0 3 0 1
Prerequisites: None
Corequisites: CHM 131
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

CHM 132 Organic and Biochemistry 3 3 0 4
Prerequisites: CHM 131
Corequisites: None
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.

CHM 151 General Chemistry I 3 3 0 4
Prerequisites: Minimum grade of "C" in all courses: CHM 090 or CHM 092; MAT 161 or MAT 171; RED 090 and ENG 090 or ENG 111
Corequisites: None
This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

CHM 152 General Chemistry II 3 3 0 4
Prerequisites: A grade of "C" or better in CHM 151
Corequisites: None
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. Students will develop laboratory skills learned in CHM 151 and give and oral presentation on a chemically relevant subject.

CHM 251 Organic Chemistry I 3 3 0 4
Prerequisites: A grade of "C" or better in CHM 152
Corequisites: None
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. Students will perform basic synthetic and analytic techniques on organic compounds.

CHM 252 Organic Chemistry II 3 3 0 4
Prerequisites: A grade of "C" or better in CHM 251
Corequisites: None
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. Students will conduct a multi-step synthetic scheme in the laboratory component.

CHM 261 Quantitative Analysis 2 6 0 4
Prerequisites: CHM 152
Corequisites: None
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 complexiметric methods. Upon completion, students should be able to perform classical quantitative analytical procedures.

INFORMATION SYSTEMS (CIS Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
CIS 001	**Microcomputer Skills Lab**	-	-	-	-

Prerequisites: None
Corequisites: None
This lab is designed to support the technical microcomputer courses by offering supplementary assistance in various software programs such as computer keyboarding, word processing and programming.

CIS 070 Fundamentals of Computing 0 2 0 1
Prerequisites: None
Corequisites: None
This course covers fundamental functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to operate computers, access files, print documents and perform basic applications operations.

CIS 110 Introduction to Computers 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitative Option). This course is also available through the Virtual Learning Community (VLC).*

CIS 111 Basic PC Literacy 1 2 0 2
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

CIS 115 Intro to Prog & Logic 2 3 0 3
Prerequisites: MAT 070, MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175 and RED 090 or ENG 111
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitative Option). This course is also available through the Virtual Learning Community (VLC).*

CIS 118 See CTS 118

CIS 120 See CTS 130

CIS 121 See CTS 250

CIS 122 Introduction to Business Computers 2 2 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course provides preparation in solving business problems using computers. Topics include hardware and software concepts, the DOS operating system, Windows, spreadsheets, and communications. Upon completion, students should be able to use DOS commands, navigate a Windows environment, use spreadsheet capabilities, and access information in a business environment.

CIS 130 See NOS 110

CIS 135 See CTS 120

CIS 143 See WEB 186

CIS 144 See NOS 111

CIS 145 See NOS 130

CIS 147 See NOS 230

CIS 152 See DBA 110

CIS 153 See DBA 115

CIS 154 See DBA 112

CIS 155 Database Theory/Analysis 2 2 0 3
Prerequisites: CIS 152 or CIS 157
Corequisites: None
This course introduces database design theories and analyses. Emphasis is placed on data dictionaries, normalization, data integrity, and data modeling. Upon completion, students should be able to design normalized database structures that exhibit data integrity.

CIS 157 See DBA 120

CIS 162 MM Presentation Software 2 2 0 3
Prerequisites: None
Corequisites: None
This course is designed to integrate visual and audio resources using presentation software in a simple interactive multimedia project. Emphasis is placed upon design and audience considerations, general prototyping, and handling of media resources. Upon completion, students should be able to demonstrate an original interactive multimedia presentation implementing all of these resources in a professional manner.

CIS 163 Programming Interfaces Internet 2 2 0 3
Prerequisites: CIS 110 or CIS 111, CIS 172 or CSC 160
Corequisites: None
This course creates interactive multimedia applications and applets for the Internet using web-specific languages. Emphasis is placed on audio, video, graphic, and network resources and various file formats. Upon completion, students should be able create an interactive multimedia application or applet for the Internet.

CIS 166 Desktop Publishing II 2 2 0 3
Prerequisites: CIS 165
Corequisites: None
This course provides advanced training in the use of a variety of desktop publishing software. Emphasis is placed on evaluation of software and hardware available for desktop publishing. Upon completion, students should be able to create and design complex publications using a variety of page layout software.

CIS 169 See CTS 125

CIS 170 See CTS 155

CIS 171 See CTS 255

CIS 172 See WEB 110

CIS 175 See NOS 231

CIS 192 Selected Topics in Information Systems - - - 2
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in information systems. Emphasis is placed on subject matter appropriate to information systems. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

CIS 193 Selected Topics in Information Systems - - - 3
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in information systems. Emphasis is placed on subject matter appropriate to information systems. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

CIS 198 Seminar: Computer Forensics 2 2 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Forensics. Emphasis is placed on the development of critical listening skills and the presentation of computer investigation and data acquisition issues. Upon completion, students should be able to critically analyze issues and establish informed opinions as an entry-level computer forensic investigator.

CIS 210 See CTS 120

CIS 215 Hardware Installation/Maintenance 2 3 0 3
Prerequisites: CIS 110 or CIS 111 or CIS 115
Corequisites: None
This course covers the basic hardware of a personal computer, including operations and interactions with software. Topics include component identification, the memory system, peripheral installation and configuration, preventive maintenance, and diagnostics and repair. Upon completion, students should be able to select appropriate computer equipment, upgrade and maintain existing equipment, and troubleshoot and repair non-functioning personal computers.

CIS 216 See CTS 220

CIS 217 See CTS 217

CIS 219 Advanced PC Application Development 2 3 0 3
Prerequisites: CIS 116
Corequisites: None
This course provides an advanced study of the principles of application development and end-user interface design principles. Emphasis is placed on advanced arrays/tables, file management, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design and program a PC application at the advanced level.

CIS 220 See CTS 230

CIS 226 See CTS 287.

CIS 228 See CTS 240

CIS 235 Advanced PC Diagnostic/Configuration 2 2 0 3
Prerequisites: CIS 135 or CIS 215
Corequisites: None
A continuation of CIS 135, this course covers upgrading and repairing personal computers and peripherals. Topics include configuring and troubleshooting peripherals, installing device drivers, resolving resource conflicts, configuring and optimizing operating systems, and related topics. Upon completion, students should be able to install peripherals and upgrade personal computers components, diagnose problems, resolve resource conflict, and optimize system performance.

CIS 254 See DBA 210

CIS 255 See DBA 230

CIS 256 See DBA 240

CIS 257 Database Programming II 2 2 0 3
Prerequisites: CIS 157
Corequisites: None
This course is designed to enhance programming skills developed in CIS 157. Topics include application development with GUI front ends and embedded programming. Upon completion, students should be able to develop a DBMS application which includes a GUI front end and report generation.

CIS 258 See DBA 289

CIS 260 Business Graphics Applications 2 2 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course utilizes graphics software in a variety of business applications. Topics include terminology, design and evaluation, graphics formats and conversion, practical applications of graphics software, and integration of peripherals. Upon completion, students should be able to create and incorporate graphic designs to enhance business communications.

CIS 270 See CTS 270

CIS 278 See CTS 289

CIS 293 Selected Topics in Information Systems: FrontPage 2 2 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: CIS 172
This course introduces the peripherals and attendant software needed to create stand-alone or networked interactive multimedia applications. Emphasis is placed on using audio, video, graphic, and resources; using peripheral-specific software; and understanding file formats. Upon completion, students should be able to utilize multimedia peripherals to create various sound and visual files to create a multimedia application.

CIS 297 Seminar in MCDST 1 2 0 2
Prerequisites: CIS 116
Corequisites: None
This course provides an opportunity to explore areas of current interest in Microsoft Certified Desktop Support Technician (MCDST). Emphasis in placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

CIS 298 Seminar in Information Systems - - - 3
Prerequisites: CIS 153
Corequisites: None
This course provides an opportunity to explore areas of current interest in Information Systems. Emphasis in placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

CIVIL ENGINEERING TECHNOLOGY (CIV Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
CIV	**110**	**Statics/Strength of Materials**	2	6	0	4

Prerequisites: MAT 121
Corequisites: None
This course includes vector analysis, equilibrium of force systems, friction, sectional properties, stress/strain, and deformation. Topics include resultants and components of forces, moments and couples, free-body diagrams, shear and moment diagrams, trusses, frames, beams, columns, connections, and combined stresses. Upon completion, students should be able to analyze simple structures.

CIV 111 Soils and Foundations 2 3 0 3
Prerequisites: CIV 110 or MEC 250
Corequisites: None
This course presents an overview of soil as a construction material using both analysis and testing procedures. Topics include index properties, classification, stress analysis, compressibility, compaction, dewatering, excavation, stabilization, settlement, and foundations. Upon completion, students should be able to perform basic soil tests and analyze engineering properties of soil.

CIV 125 Civil/Surveying CAD 1 6 0 3
Prerequisites: ARC 114 or DFT 110
Corequisites: None
This course introduces civil/surveying computer-aided drafting (CAD) software. Topics include drawing, editing, and dimensioning commands; plotting; and other related civil/surveying topics. Upon completion, students should be able to produce civil/surveying drawings using CAD software.

CIV 210 Engineering Materials 1 3 0 2
Prerequisites: None
Corequisites: None
This course covers the behavior and properties of Portland cement and asphaltic concretes and laboratory and field testing. Topics include cementing agents and aggregates; water and admixtures; proportioning, production, placing, consolidation, and curing; and inspection methods. Upon completion, students should be able to proportion concrete mixes to attain predetermined strengths and other properties and perform standard control tests.

CIV 215 Highway Technology 1 3 0 2
Prerequisites: SRV 111
Corequisites: CIV 211
This course introduces the essential elements of roadway components and design. Topics include subgrade and pavement construction, roadway drawings and details, drainage, superelevation, and North Carolina Department of Transportation Standards. Upon completion, students should be able to use roadway drawings and specifications to develop superelevation, drainage, and general highway construction details.

CIV 211 Hydraulics and Hydrology 2 3 0 3
Prerequisites: CIV 110 or MEC 250
Corequisites: None
This course introduces the basic engineering principles and characteristics of hydraulics and hydrology. Topics include precipitation and runoff, fluid statics and dynamics, flow measurement, and pipe and open channel flow. Upon completion, students should be able to analyze and size drainage structures.

CIV 221 Steel and Timber Design 2 3 0 3
Prerequisites: CIV 110 or MEC 250
Corequisites: None
This course introduces the basic elements of steel and timber structures. Topics include the analysis and design of steel and timber beams, columns, and connections and the use of appropriate manuals and codes. Upon completion, students should be able to analyze, design, and draw simple steel and timber structures.

CRIMINAL JUSTICE (CJC Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
CJC	**100**	**Basic Law Enforcement Training**	9	30	0	19

Prerequisites: None
Corequisites: None
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination. *This is a certificate-level course.*

CJC 111 Intro to Criminal Justice 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

CJC 112 Criminology 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response.

CJC 113 Juvenile Justice 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition.

CJC 114 Investigative Photography 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the operation of various photographic equipment and its application to criminal justice. Topics include using various cameras, proper exposure of film, developing film/prints, and preparing photographic evidence. Upon completion, students should be able to demonstrate and explain the role of photography and proper film exposure and development techniques.

CJC 120 Interviews/Interrogations 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical behavior and legal perspectives. Upon completion, students should be able to conduct interviews/interrogations in a legal, efficient, and professional manner and obtain the truth from suspects, witnesses, and victims.

CJC 120 Interviews/Interrogations 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical behavior and legal perspectives. Upon completion, students should be able to conduct interviews/interrogations in a legal, efficient, and professional manner and obtain the truth from suspects, witnesses, and victims.

CJC 121 Law Enforcement Operations 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations.

CJC 122 Community Policing 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the historical, philosophical, and practical dimensions of community policing. Emphasis is placed on the empowerment of police and the community to find solutions to problems by forming partnerships. Upon completion, students should be able to define community policing, describe how community policing strategies solve problems, and compare community policing to traditional policing.

CJC 131 Criminal Law 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements.

CJC 132 Court Procedure and Evidence 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence.

CJC 141 Corrections 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

CJC 141 Corrections 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

CJC 144 Crime Scene Processing 2 3 0 3
Prerequisites: None
Corequisites: None
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. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.*

CJC 145 Crime Scene CAD 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the student to CAD software for crime scenes. Topics include drawing, editing, file management and drafting theory and practices. Upon completion, students should be able to produce and plot a crime scene drawing.

CJC 146 Trace Evidence 2 3 0 3
Prerequisites: None
Corequisites: None
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. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.*

CJC 160 Terrorism: Underlying Issues 3 0 0 3
Prerequisites: None
Corequisites: None
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.

CJC 212 Ethics and Community Relations 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations.

CJC 213 Substance Abuse 3 0 0 3
Prerequisites: None
Corequisites: None
This course is a study of substance abuse in our society. Topics include the history and classifications of drug abuse and the social, physical, and psychological impact of drug abuse. Upon completion, students should be able to identify various types of drugs, their effects on human behavior and society, and treatment modalities.

CJC 214 Victimology 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the study of victims. Emphasis is placed on roles/characteristics of victims, victim interaction with the criminal justice system and society, current victim assistance programs, and other related topics. Upon completion, students should be able to discuss and identify victims, the uniqueness of victims' roles, and current victim assistance programs.

CJC 215 Organization and Administration 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations.

CJC 221 Investigative Principles 3 2 0 4
Prerequisites: None
Corequisites: None
This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.

CJC 222 Criminalistics 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the functions of the forensic laboratory and its relationship to successful criminal investigations and prosecutions. Topics include advanced crime scene processing, investigative techniques, current forensic technologies, and other related topics. Upon completion, students should be able to identify and collect relevant evidence at simulated crime scenes and request appropriate laboratory analysis of submitted evidence.

CJC 223 Organized Crime 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the evolution of traditional and non-traditional organized crime and its effect on society and the criminal justice system. Topics include identifying individuals and groups involved in organized crime, areas of criminal activity, legal and political responses to organized crime, and other related topics. Upon completion, students should be able to identify the groups and activities involved in organized crime and the responses of the criminal justice system.

CJC 225 Crisis Intervention 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces critical incident intervention and management techniques as they apply to operational criminal justice practitioners. Emphasis is placed on the victim/offender situation as well as job-related high stress, dangerous or problem-solving citizen contacts. Upon completion, students should be able to provide insightful analysis of emotional, violent, drug-induced, and other critical and/or stressful incidents that require field analysis and/or resolution.

CJC 231 Constitutional Law 3 0 0 3
Prerequisites: None
Corequisites: None
The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.

CJC 232 Civil Liability 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers liability issues for the criminal justice professional. Topics include civil rights violations, tort liability, employment issues, and other related topics. Upon completion, students should be able to explain civil trial procedures and discuss contemporary liability issues.

CJC 233 Correctional Law 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces statutory/case law pertinent to correctional concepts, facilities, and related practices. Topics include

examination of major legal issues encompassing incarceration, probation, parole, restitution, pardon, restoration of rights, and other related topics. Upon completion, students should be able to identify/discuss legal issues which directly affect correctional systems and personnel.

CJC 241 Community-Based Corrections 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers programs for convicted offenders that are used both as alternatives to incarceration and in post-incarceration situations. Topics include offenders, diversion, house arrest, restitution, community service, probation and parole, including both public and private participation, and other related topics. Upon completion, students should be able to identify/discuss the various programs from the perspective of the criminal justice professional, the offender, and the community.

CJC 245 Friction Ridge Analysis 2 3 0 3
Prerequisites: None
Corequisites: None
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. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.*

CJC 246 Adv Friction Ridge Analys 2 3 0 3
Prerequisites: CJC 245
Corequisites: None
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. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.*

CONSTRUCTION MANAGEMENT (CMT Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
CMT	**112**	**Construction Mgt I**	4	4	0	6

Prerequisites: None
Corequisites: None
This course introduces students to the field of construction management technology. Topics include job planning, work methods, materials, equipment, and other related topics. Upon completion, students should be able to demonstrate basic knowledge of methods, materials, equipment, and the logical sequence of a construction project.

CMT 112A Construction Mgt I, Part 1 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces students to the field of construction management technology. Topics include job planning, work methods, materials, equipment, and other related topics. Upon completion, students should be able to demonstrate basic knowledge of methods, materials, equipment, and the logical sequence of a construction project.

CMT 112B Construction Mgt I, Part 2 2 2 0 3
Prerequisites: CMT 112A
Corequisites: None
This course introduces students to the field of construction management technology. Topics include job planning, work methods, materials, equipment, and other related topics. Upon completion, students should be able to demonstrate basic knowledge of methods, materials, equipment, and the logical sequence of a construction project.

CMT 120 Codes and Inspections 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (handicapped) building codes. Upon completion, students should be able to understand the building code inspections process and apply building code principals and requirements to construction projects.

CMT 210 Professional Construction Supervision 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contract, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, the student should be able to demonstrate the basic skills necessary to be successful as a supervisor in the construction industry.

CMT 212 Total Safety Performance 3 0 0 3
Prerequisites: None
Corequisites: CMT 210
This course covers the importance of managing safety and productivity equally by encouraging people to take individual responsibility for safety and health in the workplace. Topics include safety management, controlling construction hazards, communicating and enforcing policies, OSHA compliance, personal responsibility and accountability, safety planning, training, and personal protective equipment. Upon completion, students should be able to supervise safety at a construction job site and qualify for the OSHA Training Certification.

CMT 214 Planning and Scheduling 3 0 0 3
Prerequisites: CMT 210 and BPR 130
Corequisites: None
This course covers the need for the process of planning construction projects, as well as the mechanics and vocabulary of project scheduling. Topics include project preplanning, scheduling format, planning for production, short interval planning, schedule updating and revising, and computer-based planning and scheduling. Upon completion, the student should be able to understand the need for planning and scheduling, the language and logic of scheduling, and use of planning skills.

CMT 216 Costs and Productivity 3 0 0 3
Prerequisites: CMT 210
Corequisites: None
This course covers the relationships between time, work completed, work-hours spent, schedule duration, equipment hours, and materials used. Topics include production rates, productivity unit rates, work method improvements, and overall total project cost control. Upon completion, the student should be able to demonstrate an understanding of how costs may be controlled and productivity improved on a construction project.

CMT 218 Human Relations Issues 3 0 0 3
Prerequisites: CMT 210
Corequisites: None
This course provides instruction on human relations issues as they relate to construction project supervision. Topics include relationships, human behavior, project staffing issues, teamwork, effective communication networks, laws and regulations, and identifying and responding to conflict, crisis, and discipline. Upon completion, the student will demonstrate an understanding of the importance of human relations in the success of a construction project.

CMT 226 Applications Project 2 2 0 3
Prerequisites: None
Corequisites: None
This course provides an individual and/or integrated team approach to a practical construction management project. Topics include project selection, research and planning, implementation, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented construction management project.

COOPERATIVE EDUCATION (COE Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
COE	**111**	**Co-op Work Experience I**	0	0	10	1

Prerequisites: None
Corequisites: None
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.

COE 112 Co-op Work Experience I 0 0 20 2
Prerequisites: None
Corequisites: None
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.

COE 113 Co-op Work Experience I 0 0 30 3
Prerequisites: None
Corequisites: None
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.

COE 114 Co-op Work Experience I 0 0 40 4
Prerequisites: None
Corequisites: None
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.

COE 115 Work Experience Seminar I 1 0 0 1
Prerequisites: None
Corequisites: COE 111 or COE 112 or COE 113 or COE 114
This is a seminar course designed to enrich the student's cooperative education work experience.

COE 121 Co-op Work Experience II 0 0 10 1
Prerequisites: None
Corequisites: None
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.

COE 122 Co-op Work Experience II 0 0 20 2
Prerequisites: None
Corequisites: None
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.

COE 123 Co-op Work Experience III 0 0 30 3
Prerequisites: None
Corequisites: None
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.

COE 124 Co-op Work Experience II 0 0 40 4
Prerequisites: None
Corequisites: None
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.

COE 125 Work Experience Seminar II 1 0 0 1
Prerequisites: None
Corequisites: COE 121 or COE 122 or COE 123 or COE 124
This is a seminar course designed to enrich the student's cooperative education work experience.

COE 131 Co-op Work Experience III 0 0 10 1
Prerequisites: None
Corequisites: None
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.

COE 211 Co-op Work Experience IV 0 0 10 1
Prerequisites: None
Corequisites: None
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.

COE 223 Co-op Work Experience V 0 0 30 3
Prerequisites: None
Corequisites: None
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.

COMMUNICATION (COM Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
COM 110	**Introduction to Communication**	3	0	0	3

Prerequisites: None
Corequisites: None
This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal group, public, intercultural, and mass communication situations. Upon completion, students should be able to explain and illustrate the forms and purposes of human communication in a variety of contexts.

COM 111 Voice and Diction I 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides guided practice in the proper production of speech. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective natural speech in various contexts.

COM 120 Interpersonal Communication 3 0 0 3
Prerequisites: RED 080 and ENG 080
Corequisites: None
This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations.

COM 130 Nonverbal Communication 3 0 0 3
Prerequisites: COM 120
Corequisites: None
This course introduces the contemporary study of nonverbal communication in daily life. Topics include haptics, kinesics, proxemics, facial displays, and appearance. Upon completion, students should be able to analyze/interpret nonverbal communication and demonstrate greater awareness of their own nonverbal communication habits.

COM 140 Intro Intercultural Com 3 0 0 3
Prerequisites: RED 090 and ENG 090 or ENG 111
Corequisites: None
This course introduces techniques of cultural research, definitions, functions, characteristics, and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one's primary culture. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts (substitute).*

COM 150 Intro to Mass Comm. 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces print and electronic media and the new information technologies in terms of communication theory and as economic, political, and social institutions. Topics include the nature, history, functions, and responsibilities of mass communication industries in a global environment and their role and impact in American society. Upon completion, students should be able to demonstrate awareness of the pervasive nature of mass media and how media operate in an advanced post-industrial society. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

COM 160 Small Group Communication 3 0 0 3
Prerequisites: RED 090 and ENG 090
Corequisites: None
This course provides an overview of the theory, practice, and critical analysis of communication in the small group setting. Emphasis is placed on group development, conflict, and conformity; leadership skills and styles; group roles and ranks; and decision making, problem solving, and conflict resolution. Upon completion, students should be able to apply topics of gender, culture, and social-emotional functions within group settings. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

COM 231 Public Speaking 3 0 0 3
Prerequisites: Grade of "C" or better in ENG 111
Corequisites: None
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.

COM 232 Election Rhetoric 3 0 0 3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides an overview of communication styles and topics characteristic of election campaigns. Topics include election speeches, techniques used in election campaigns, and election speech topics. Upon completion, students should be able to identify and analyze techniques and styles typically used in election campaigns.

COM 233 Persuasive Speaking 3 0 0 3
Prerequisites: ENG 112 or ENG 113
Corequisites: None
This course introduces theory and history of persuasive speaking, covering critical thinking skills in analyzing problems, assessing solutions, and communicating the information to an audience. Emphasis is placed on analysis, evidence, reasoning, and library and

field research used to enhance persuasive public speaking skills. Upon completion, students should be able to apply the principles of persuasive speaking in a public setting.

COM 251 Debate I 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the principles of debate. Emphasis is placed on argument, refutation, research, and logic. Upon completion, students should be able to use research skills and logic in the presentation of ideas within the context of formal debate.

COSMETOLOGY (COS Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
COS	**111**	**Cosmetology Concepts I**	4	0	0	4

Prerequisites: None
Corequisites: COS 112
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics.
Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

COS 111A Cosmetology Concepts I, Part 1 2 0 0 2
Prerequisites: None
Corequisites: COS 112A
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. This is part one of a two-part course.

COS 111B Cosmetology Concepts I, Part 2 2 0 0 2
Prerequisites: None
Corequisites: COS 112B
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. This is part two of a two-part course.

COS 112 Salon I 0 24 0 8
Prerequisites: None
Corequisites: COS 111
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.

COS 112A Salon I, Part 1 0 12 0 4
Prerequisites: None
Corequisites: COS 111A
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. This is part one of a two-part course.

COS 112B Salon I, Part 2 0 12 0 4
Prerequisites: None
Corequisites: COS 111B
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. This is part two of a two-part course.

COS 113 Cosmetology Concepts II 4 0 0 4
Prerequisites: None
Corequisites: COS 114
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

COS 113A Cosmetology Concepts II, Part 1 2 0 0 2
Prerequisites: None
Corequisites: COS 114A
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. This is part one of a two-part course.

COS 113B Cosmetology Concepts II, Part 2 2 0 0 2
Prerequisites: None
Corequisites: COS 114B
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. This is part two of a two-part course.

COS 114 Salon II 0 24 0 8
Prerequisites: None
Corequisites: COS 113
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

COS 114A Salon II, Part 1 0 12 0 4
Prerequisites: None
Corequisites: COS 113A
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. This is part one of a two-part course.

COS 114B Salon II, Part 2 0 12 0 4
Prerequisites: None
Corequisites: COS 113B
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. This is part two of a two-part course.

COS 115 Cosmetology Concepts III 4 0 0 4
Prerequisites: None
Corequisites: COS 116
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

COS 115A Cosmetology Concepts III, Part 1 2 0 0 2
Prerequisites: None
Corequisites: COS 116A
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. This is part one of a two-part course.

COS 115B Cosmetology Concepts III, Part 2 2 0 0 2
Prerequisites: None
Corequisites: COS 116B
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. This is part two of a two-part course.

COS 116 Salon III 0 12 0 4
Prerequisites: None
Corequisites: COS 115
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

COS 116A Salon III, Part 1 0 6 0 2
Prerequisites: None
Corequisites: COS 115A
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. This is part one of a two-part course.

COS 116B Salon III, Part 2 0 6 0 2
Prerequisites: None
Corequisites: COS 115B
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. This is part two of a two-part course.

COS 117 Cosmetology Concepts IV 2 0 0 2
Prerequisites: None
Corequisites: COS 118
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.

COS 117A Cosmetology Concepts IV, Part 1 1 0 0 1
Prerequisites: None
Corequisites: COS 118A
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. This is part one of a two-part course.

COS 117B Cosmetology Concepts IV, Part 2 1 0 0 1
Prerequisites: None
Corequisites: COS 118B
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. This is part two of a two-part course.

COS 118 Salon IV 0 21 0 7
Prerequisites: None
Corequisites: COS 117
This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.

COS 118A Salon IV, Part 1 0 15 0 5
Prerequisites: None
Corequisites: COS 117A
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. This is part one of a two-part course.

COS 118B Salon IV, Part 2 0 6 0 2
Prerequisites: None
Corequisites: COS 117B
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. This is part two of a two-part course.

COS 119 Esthetics Concepts I 2 0 0 2
Prerequisites: None
Corequisites: None
This course covers the concepts of esthetics. Topics include orientation, anatomy, physiology, hygiene, sterilization, first aid, chemistry, basic dermatology, and professional ethics. Upon completion, students should be able to demonstrate an understanding of the concepts of esthetics and meet course requirements.

COS 119A Esthetics Concepts I, Part 1 1 0 0 1
Prerequisites: None
Corequisites: None
This course covers the concepts of esthetics. Topics include orientation, anatomy, physiology, hygiene, sterilization, first aid, chemistry, basic dermatology, and professional ethics. Upon completion, students should be able to demonstrate an understanding of the concepts of esthetics and meet course requirements. This is part one of a two-part course.

COMPUTER SCIENCE (CSC Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
CSC 120	**Computing Fundamentals I**	3	2	0	4

Prerequisites: MAT 080 or MAT 090
Corequisites: None
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.

CSC 125 Introduction to Parallel Programming 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces students to the techniques and tools used to write parallel programs. Topics include principles of parallel program design including architecture, algorithms, performance modeling, parallel programming standards, Message Passing Interface (MPI), OpenMP, API, and modern parallel languages. Upon completion, students should be able to discuss programming issues in a High Performance Computing system.

CSC 129 Technical Programming 2 3 0 3
Prerequisites: MAT 121
Corequisites: None
This course introduces the analysis of technical problems by using different software tools. Emphasis is placed on solving technical problems using structured programming logic and tools such as a computer language, spreadsheet software, or an advanced programmable calculator. Upon completion, students should be able to derive solutions to complex technical problems using various software tools.

CSC 130 Computing Fundamentals II 3 2 0 4
Prerequisites: CSC 120
Corequisites: None
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.

CSC 133 C Programming 2 3 0 3
Prerequisites: MAT 070
Corequisites: None
This course introduces computer programming using the C programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays tables, pointers, and other related topics. Upon completion, students should be able to design, code, test, and debug C language programs.

CSC 134 C++ Programming 2 3 0 3
Prerequisites: CIS 115
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

CSC 136 FORTRAN Programming 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces computer programming using the FORTRAN programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays, subprograms, and other related topics. Upon completion, students should be able to design, code, test, and debug FORTRAN language programs.

CSC 139 Visual BASIC Prog 2 3 0 3
Prerequisites: Take 1 group: MAT 070 and RED 090 or MAT 070 and ENG 111
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC). This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

CSC 141 Visual C++ Prog 2 3 0 3
Prerequisites: CSC 134
Corequisites: None
This course introduces computer programming using the Visual C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment at a beginning level.

CSC 142 Visual COBOL Prog 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces computer programming using the Visual COBOL programming language with structured programming principles. Topics include input/output operations, iteration, arithmetic operations, arrays, pointers, filters, and other related topics. Upon completion, students should be able to design, code, test and debug at a beginning level.

CSC 143 Object-Oriented Prog 2 3 0 3
Prerequisites: Take 1 group: MAT 070 and RED 090 or MAT 070 and ENG 111
Corequisites: None
This course introduces the concepts of object-oriented programming. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, test, debug, and implement objects at the application level using the appropriate environment.

CSC 144 AS/400 CL Programming 2 3 0 3
Prerequisites: CIS 115 and NOS 211
Corequisites: None
This course introduces computer programming using the CL programming language. Topics include CL command structure, command parameters, creating CL programs, manipulating variables, writing commands to control jobs and workflow, and other related topics. Upon completion, students should be able to design, code, test, and debug CL programs.

CSC 148 See CSC 151

CSC 150 Visual RPG Prog 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces computer programming using the Visual 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.

CSC 151 JAVA Programming 2 3 0 3
Prerequisites: CIS 115
Corequisites: None
This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion students should be able to design, code, test, debug JAVA language programs. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).

CSC 152 SAS 2 3 0 3
Prerequisites: Take 1 group: MAT 070 and RED 090 or MAT 070 and ENG 111
Corequisites: None
This course introduces the fundamentals of SAS programming. Emphasis is placed on learning basic SAS commands and statements for solving a variety of data processing applications. Upon completion, students should be able to use SAS data and procedure steps to create SAS data sets, do statistical analysis, and general customized reports.

CSC 153 C# Programming 2 3 0 3
Prerequisites: Take 1 group: MAT 070 and RED 090 or MAT 070 and ENG 111
Corequisites: None
This course introduces computer programming using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment at the beginning level.

CSC 160 See WEB 115

CSC 175 See WEB 182

CSC 185 See WEB 183

CSC 192 Selected Topics: MFC Project 1 2 0 2
Prerequisites: CSC 234
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on subject matter appropriate to computer programming. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

CSC 193A Selected Topics in: Oracle Performance Tuning 2 2 0 3
Prerequisites: CIS 255
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on subject matter appropriate to computer programming. Upon completion, students should be able to demonstrate an understanding of the specific area of study. This course will prepare students for Oracle DBA certification.

CSC 198 Seminar in C Programming 2 2 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

CSC 220 Machine Implementation of Algorithms 3 2 0 4
Prerequisites: CSC 120
Corequisites: MAT 271
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.

CSC 225 Advanced Parallel Programming 2 3 0 3
Prerequisites: CSC 125
Corequisites: None
The course introduces students to advanced topics in parallel programming and reviews available tools and libraries for parallel programming. Topics include partitioning and scheduling techniques, performance metrics and scalability, cluster environment programming, vector processing, compiler directives, code optimization and algorithms for parallel computers. Upon completion, students should be able to design an application in a HPC environment.

CSC 229 MPI Programming 2 3 0 3
Prerequisites: CSC 125
Corequisites: None
This course introduces students to the Message Passing Interface (MPI) library. Topics include writing programs using the MPI routines, adding parallelism to application code, collective operations, timing, manipulation communicators, PTP operations, and tuning parallel programs. Upon completion, students should be able to design and code a program using the MPI library.

CSC 233 Advanced C 2 3 0 3
Prerequisites: CSC 133
Corequisites: None
This course is a continuation of CSC 133 using C 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.

CSC 234 Advanced C++ 2 3 0 3
Prerequisites: CSC 134
Corequisites: None
This course is a continuation of CSC 134 using C++ 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. Additional topics will include binary and textfile manipulation, virtual functions and classes, templates, class libraries, and windows programming.

CSC 236 Advanced Fortran Programming 2 3 0 3
Prerequisites: CSC 136
Corequisites: None
This course is a continuation of CSC 136 using the Fortran 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.

CSC 238 Adv RPG Programming 2 3 0 3
Prerequisites: CSC 138
Corequisites: None
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.

CSC 239 Advanced Visual BASIC 2 3 0 3
Prerequisites: CSC 139
Corequisites: DBA 110
This course is a continuation of CSC 139 using Visual BASIC with structured programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug, and document programming solutions. Emphasis will be placed on linking to and manipulating a database through tables, queries, and customization using API calls.

CSC 241 Adv Visual C++ Programming 2 3 0 3
Prerequisites: CSC 141
Corequisites: None
This course is a continuation of CSC 141 using the Visual C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

CSC 242 Advanced Visual COBOL Programming 2 3 0 3
Prerequisites: CSC 142
Corequisites: None
This course is a continuation of CSC 142 using the Visual COBOL 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

CSC 244 CICS 4 2 0 5
Prerequisites: CSC 235
Corequisites: None
This course provides an in-depth study of interactive transaction processing using command level CICS. Topics include pseudoconversational programming, basic mapping support, control tables, storage areas, file maintenance, screen design, and EDF debugging. Upon completion, students should be able to design, code, test, debug, and document command level COBOL programs for menuing, record processing, browsing, and temporary storage.

CSC 245 Advanced C/C++ Programming 2 3 0 3
Prerequisites: CSC 133, CSC 134, CSC 140, CSC 141, or CSC 145
Corequisites: None
This course covers additional operations using C dialects primarily relating to operating system interfacing. Topics include advanced file handling, interprocess communications, messages, semaphores, inter-language calls, signals, device drivers, sockets, and client/server techniques. Upon completion, students should be able to write and modify programs using advanced functions.

CSC 246 Realtime Programming 2 3 0 3
Prerequisites: A high-level or assembly programming language
Corequisites: None
This course covers the techniques for programming in a realtime environment. Topics include signals, critical sections, polling, interface devices, timing, open and closed loop control, speed/size optimization, and special considerations for embedded controllers. Upon completion, students should be able to write and modify interface routines used with time-critical applications.

CSC 247 Advanced Assembly Language 2 3 0 3
Prerequisites: None
Corequisites: None
This course covers additional techniques used in efficient assembly language programs. Topics include memory models, re-entrant code, recursion, ROM-able code, disassembly, patching, device drivers, and interfacing to high-level languages. Upon completion, students should be able to create, patch, and optimize sub-programs for use in solving problems

CSC 248 See WEB 215

CSC 249 Data Structures and Algorithms 2 3 0 3
Prerequisites: CSC 132, CSC 133, CSC 134, CSC 135, CSC 136, CIS 137, CSC 151
Corequisites: None
This course introduces the data structures and algorithms frequently used in programming applications. Topics include lists, stacks, queues, dequeues, heaps, sorting, searching, mathematical operations, recursion, encryption, random numbers, algorithm testing, and standards. Upon completion, students should be able to design data structures and implement algorithms to solve various problems.

CSC 250 Advanced Visual RPG Programming 2 3 0 3
Prerequisites: CSC 150
Corequisites: None
This course is a continuation of CSC 150 using the Visual 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.

CSC 251 Advanced JAVA Programming 2 3 0 3
Prerequisites: CSC 151
Corequisites: None
This course is a continuation of CSC 151 using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

CSC 253 Advanced C# Programming 2 3 0 3
Prerequisites: CSC 153
Corequisites: None
This course is a continuation of CSC 153 using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

CSC 255 OpenMP Programming 2 3 0 3
Prerequisites: CSC 125
Corequisites: None
This course introduces students to the basics of using the OpenMP programming standard. Topics include directive-based shared memory parallel processing, incremental parallelization, and developing portable code for shared memory architectures using the OpenMP model. Upon completion, students should be able to design and code a program using the OpenMP standard.

CSC 258 JAVA Enterprise Programs 2 3 0 3
Prerequisites: CSC 151
Corequisites: CSC 251
This course provides a continuation to CSC 151 using the Java Enterprise Edition (JEE) programming architecture. Topics include distributed network applications, database connectivity, Enterprise Java Beans, servlets, collection frameworks, JNDI, RMI, JSP, multithreading XML and multimedia development. Upon completion, students should be able to program a client/server enterprise application using the JEE framework.

CSC 260 Programming in Another Language 2 2 0 3
Prerequisites: CSC 120
Corequisites: None
This course provides in-depth coverage, with applications, of a programming language which was not covered in CSC 120, 130, 220, or 230. Emphasis is placed on using the covered language to develop well-structured programs to solve appropriate problems. Upon completion, students should be able to understand the uses, syntax, and limitations of the language while comparing similarities and differences with other languages.

CSC 275 HPC Algorithms 2 2 0 3
Prerequisites: CSC 125
Corequisites: None
This course introduces students to the various algorithms available for HPC environments. Topics include distributed algorithms, programming models for massively parallel machines, various parallel standard template libraries, distributed-memory message-passing algorithms, minimal communication and latency-tolerant algorithms. Upon completion, students should be able to discuss and code a program using HPC algorithms.

CSC 278 JAVA Message Service 2 3 0 3
Prerequisites: CSC 151
Corequisites: None
This course introduces the student to the Java Message Service (JMS), an application program interface that supports messaging between computers in a network. Topics include point-to-point models, transactions, reliability issues, durable subscriptions and introduces messaging within Enterprise JavaBeans technology.
Upon completion, students should be able to complete a project using the JMS technology.

CSC 284 Emerging Computer Programing Technologies 2 3 0 3
Prerequisites: None
Corequisites: None
This course provides students with the latest technologies and strategies in the field of Computer Programming. Emphasis is placed on the evaluation of developing Computer Programming Technologies and presenting those findings to the class. Upon completion, students should be able to critically analyze emerging Computer Programming Technologies and establish informed opinions.

CSC 285 See CSC 289

CSC 289 Programming Capstone Project 1 4 0 3
Prerequisites: CTS 285
Corequisites: None
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.

CSC 291 Selected Topics in Computer Programming: C++ Project 0 2 0 1
Prerequisites: None
Corequisites: CSC 234
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on subject matter appropriate to computer programming. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

CSC 292 Selected Topics in Computer Programming: Visual Basic Project 1 2 0 2
Prerequisites: CSC 239
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on subject matter appropriate to computer programming. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

CSC 293 Selected Topics: ORACLE Projects - - - 3
Prerequisites: CIS 257
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on subject matter appropriate to computer programming. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

CSC 296 Seminar in JAVA Project 2 0 0 1
Prerequisites: CSC 148, CSC 251
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

CSC 297 ADO.NET 1 3 0 2
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions. *Course will review the ADO.NET component of the Visual Studio. NET Framework to build applications and web services*.

CSC 298 Seminar in Computer Programming - - - 3
Prerequisites: CIS 256
Corequisites: None
This course provides an opportunity to explore areas of current interest in Computer Programming. Emphasis in placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

CONSTRUCTION (CST Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
CST	**241**	**Planning/Estimating I**	2	2	0	3

Prerequisites: BPR 130 or MAT 120 or MAT 121 or MAT 161 or MAT 171 or MAT 175
Corequisites: None
This course covers the procedures involved in planning and estimating a residential structure. Topics include labor and equipment with emphasis placed on quantity take-off of materials necessary to construct a residential structure. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs and plan the labor to construct a residential structure.

CST 242 Planning/Estimating II 3 2 0 4
Prerequisites: CST 241
Corequisites: None
This course covers planning and estimating practices, which are applicable to commercial construction. Emphasis is placed on planning and developing take-offs of materials, labor, and equipment in accordance with industry formats. Upon completion, students should be able to accurately complete take-offs and planning time lines necessary to complete a commercial structure.

CST 244 Sustainable Bldg Design 2 3 0 3
Prerequisites: None
Corequisites: None
This course is designed to increase student knowledge about integrating sustainable design principles and green building technologies into mainstream residential construction practices. Emphasis is placed on reducing negative environmental impact and improving building performance, indoor air quality and the comfort of a building's occupants. Upon completion, students should be able to identify principles of green building, environmental efficiency and conservation of natural resources in relation to basic construction practices.

COMPUTER INFORMATION TECHNOLOGY (CTS Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
CTS	**080**	**Computing Fundamentals**	2	3	0	3

Prerequisites: None
Corequisites: None
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.

CTS 112 Windows™ 1 2 0 2
Prerequisites: None
Corequisites: None
This course includes the fundamentals of the Windows™ software. Topics include graphical user interface, icons, directories, file

management, accessories, and other applications. Upon completion, students should be able to use Windows™ software in an office environment.

CTS 115 Information Systems Business Concepts 3 0 0 3
Prerequisites: CIS 110 or CIS 111 or SGD 111
Corequisites: None
The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems.

CTS 118 IS Professional Communication 2 0 0 2
Prerequisites: CTS 120, CTS 135, and CIS 110 or CIS 111
Corequisites: None
This course prepares the information systems professional to communicate with corporate personnel from management to end-users. Topics include information systems cost justification tools, awareness of personal hierarchy of needs, addressing these needs, and discussing technical issues with non-technical personnel. Upon completion, students should be able to communicate information systems issues to technical and non-technical personnel.

CTS 120 Hardware/Software Support 2 3 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

CTS 125 Presentation Graphics 2 2 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course provides hands-on experience with a graphics presentation package. Topics include terminology, effective chart usage, design and layout, integrating hardware components, and enhancing presentations with text, graphics, audio and video. Upon completion, students should be able to design and demonstrate an effective presentation.

CTS 130 Spreadsheet 2 2 0 3
Prerequisites: CIS 110 or CIS 111 or OST 137
Corequisites: None
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.

CTS 135 Integrated Software Introduction 2 4 0 4
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course instructs students in the Windows or Linux based program suites for word processing, spreadsheet, database, personal information manager, and presentation software. This course prepares students for introductory level skills in database, spreadsheet, personal information manager, word processing, and presentation applications to utilize data sharing. Upon completion, students should be able to design and integrate data at an introductory level to produce documents using multiple technologies.

CTS 155 Technical Support Functions 2 2 0 3
Prerequisites: RED 090
Corequisites: CIS 110 or CIS 111 or NET 110
This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Emphasis is placed on technical support management techniques and support technologies. Upon completion, students should be able to determine the best technologies to support and solve actual technical support problems.

CTS 198 Seminar on Computer Crimes Investigation 2 3 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in computer forensics. Emphasis is placed on standard procedures for obtaining, securing, and managing digital evidence. Upon completion, students should be able to demonstrate how to correctly process digital evidence from the beginning to the end of a case.

CTS 210 Computer Ethics 3 0 0 3
Prerequisites: CIS 110 or CIS 111 or NET 110 or TNE 111
Corequisites: None
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.

CTS 220 Adv Hard/Software Support 2 3 0 3
Prerequisites: CTS 120
Corequisites: None
This course provides advanced knowledge and competencies in hardware and operating system technologies for computer technicians to support personal computers. Emphasis is placed on: configuring and upgrading; diagnosis and troubleshooting; as well as preventive maintenance of hardware and system software. Upon completion, students should be able to install, configure, diagnose, perform preventive maintenance, and maintain basic networking on personal computers.

CTS 230 Advanced Spreadsheet 2 2 0 3
Prerequisites: CTS 130
Corequisites: None
This course covers advanced spreadsheet design and development. Topics include advanced functions and statistics, charting, macros, databases, and linking. Upon completion, students should be able to demonstrate competence in designing complex spreadsheets.

CTS 235 Integrated Software Advanced 2 4 0 4
Prerequisites: CTS 135
Corequisites: None
This course provides strategies to perform data transfer among software programs. Emphasis is placed on data interchange among word processors, spreadsheets, presentation graphics, databases and communications products. Upon completion, students should be able to integrate data to produce documents using multiple technologies.

CTS 240 Project Management 2 2 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course introduces computerized project management software. Topics include identifying critical paths, cost management, and problem solving. Upon completion, students should be able to plan a complete project and project time and costs accurately.

CTS 245 Integrated Apps Expert 2 3 0 3
Prerequisites: CTS 235
Corequisites: None
This course provides an emphasis on mastery features in each of the application program areas. Emphasis is placed on end-user skills to achieve advanced support level proficiency by utilizing software for cross-platform integration, automation of processing, and application problem solving. Upon completion, students should be able to demonstrate expert level skills in the utilization of advanced features of the software in the workplace.

CTS 250 User Support & Software Evaluation 2 2 0 3
Prerequisites: CTS 120 and NOS 130
Corequisites: None
This course provides an opportunity to evaluate software and hardware and make recommendations to meet end-user needs. Emphasis is placed on software and hardware evaluation, installation, training, and support. Upon completion, students should be able to present proposals and make hardware and software recommendations based on their evaluations.

CTS 255 Advanced Technical Support Functions 2 2 0 3
Prerequisites: CTS 155
Corequisites: None
This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Topics include technical support management techniques, evaluation, and methods of deployment for technical support technologies. Upon completion, students should be able to determine the best technologies to support and solve more complex technical support problems.

CTS 271 Desktop Support: OS 2 2 0 3
Prerequisites: CIS 110 or CIS 111, and NOS 110
Corequisites: None
This course is designed to prepare students for a foundation in desktop support certifications in an operating system. Emphasis is placed on developing proficiency in the end-user support skills, processes, and procedures necessary to correctly support an operating system. Upon completion, students should be able to prepare for industry-level certifications and utilize advanced support tools to resolve operating system end-user problems.

CTS 272 Desktop Support: Apps 2 2 0 3
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course is designed to prepare students for a foundation in Desktop Support certification in office productivity applications. Emphasis is placed on developing proficiency in the end-user support skills, processes, and procedures necessary to correctly support office productivity products. Upon completion, students should be able to prepare for industry-level certification and utilize advanced support tools toward resolving office productivity end-user problems.

CTS 285 Systems Analysis & Design 3 0 0 3
Prerequisites: CIS 115, CTS 115
Corequisites: None
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.

CTS 289 System Support Project 1 4 0 3
Prerequisites: CTS 285, CTS 135, CTS 220, and NOS 230
Corequisites: CTS 255
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.

CTS 292 Selected Topics in Tech Support Manager 1 2 0 2
Prerequisites: None
Corequisites: CTS 255
This course provides an opportunity to explore areas of current interest in Help Desk and/or Technical Support Management. Emphasis is placed on subject matter appropriate to Help Desk and/or Technical Support industry certification. Upon completion, students should be able to demonstrate an understanding of Help Desk and/or Technical Support Management and be able to pursue certification in HDM – Help Desk Management.

CTS 297 Seminar in MCDST 1 0 3 2
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course provides an opportunity to explore areas of current interest in Microsoft Certified Desktop Support Technician (MCDST). Emphasis in placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

CULINARY (CUL Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
CUL 110	**Sanitation and Safety**	2	0	0	2

Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111 and MAT 070
Corequisites: None
This course introduces the basic principles of sanitation and safety and their relationship to the hospitality industry. Topics include personal hygiene, sanitation and safety regulations, use and care of equipment, the principles of food-borne illness, and other related topics. Upon completion, students should be able to demonstrate an understanding of sanitation and safety procedures in the hospitality industry.

CUL 112 Nutrition for Foodservice 3 0 0 3
Prerequisites: CUL 110 and CUL 140
Corequisites: None
This course covers the principles of nutrition and its relationship to the foodservice industry. Topics include personal nutrition fundamentals, weight management, exercise, nutritional adaptation/analysis of recipes/menus, healthy cooking techniques and marketing nutrition in a foodservice operation. Upon completion, students should be able to apply basic nutritional concepts to food preparation and selection.

CUL 130 Menu Design 2 0 0 2
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111 and MAT 070
Corequisites: None
This course introduces menu design. Topics include development of standardized recipes, layout, nutritional concerns, product utilization, demographics, and customer needs. Upon completion, students should be able to write, lay out, and produce effective menus for a variety of hospitality settings.

CUL 135 Food & Beverage Service 2 0 0 2
Prerequisite CUL 110
Corequisites CUL 135A
This course is designed to cover the practical skills and knowledge necessary for effective food and beverage service in a variety of settings. Topics include greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles and reservations. Upon completion, students should be able to demonstrate competence in human relations and the skills required in the service of foods and beverages.

CUL 135A Food and Beverage Service Lab 0 2 0 1
Prerequisites: None
Corequisites: CUL 135
This course provides a laboratory experience for enhancing student skills in effective food and beverage service. Emphasis is placed on practical experiences including greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles and reservations. Upon completion, students should be able to demonstrate practical applications of human relations and the skills required in the service of foods and beverages.

CUL 140 Basic Culinary Skills 2 6 0 5
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111 and MAT 070
Corequisites: None
This course introduces the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on recipe conversion, measurements, terminology, knife skills, safe food handling, cooking methods, flavorings, seasonings, stocks/sauces/soups, and other related topics. Upon completion, students should be able to exhibit the basic cooking skills used in the food service industry.

CUL 142 Fundamentals of Food 2 6 0 5
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111 and MAT 070
Corequisites: None
This course introduces the student to the basic principles of cooking, baking and kitchen operations. Topics include protein, starch, vegetable/fruit identification, selection, storage and preparation; breakfast cookery, breads, sweet doughs and pastries, knife/organizational skills, and work coordination. Upon completion, students should be able to execute efficiently a variety of cooking/baking skills as they apply to different stations in the kitchen.

CUL 160 Baking I 1 4 0 3
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111 and MAT 070
Corequisites: CUL 110 and CUL 140
This course covers basic ingredients, weights and measures, baking terminology, and formula calculations. Topics include yeast-raised products, quick breads, pastry dough, various cakes and cookies, and appropriate filling and finishing techniques. Upon completion, students should be able to prepare and evaluate baked products.

CUL 170 Garde Manger I 1 4 0 3
Prerequisites: CUL 140
Corequisites: CUL 110
This course introduces basic cold food preparation techniques and pantry production. Topics include salads, sandwiches, appetizers, dressings, basic garnishes, cheeses, cold sauces, and related food items. Upon completion, students should be able to present a cold food display and exhibit an understanding of the cold kitchen and its related terminology.

CUL 214 Wine Appreciation 1 2 0 2
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111 and MAT 070
Corequisites: None
This course provides comprehensive and detailed information about wine from all the major wine producing countries. Emphasis is placed on the history of wine, production characteristics, laws, and purchasing and storing requirements. Upon completion, students should be able to determine what wines compliment various cuisines and particular tastes. Must be 21 years old or older to take this class.

CUL 230 Global Cuisines 1 8 0 5
Prerequisites: CUL 110, CUL 112, CUL 140, and CUL 240
Corequisites: HRM 220
This course provides practical experience in the planning, preparation, and presentation of representative foods from a variety of world cuisines. Emphasis is placed on indigenous ingredients and customs, nutritional concerns, and cooking techniques. Upon completion, students should be able to research and execute a variety of international and domestic menus.

CUL 240 Culinary Skills II 1 8 0 5
Prerequisites: CUL 110 and CUL 140
Corequisites: None
This course is designed to further students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on meat identification/fabrication, butchery and cooking techniques/methods; appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and quantity food preparation. Upon completion, students should be able to plan, execute, and successfully serve entrees with complementary side items.

CUL 250 Classical Cuisine 1 8 0 5
Prerequisites: CUL 110, CUL 140, CUL 160, CUL 170, and CUL 240
Corequisites: COE 112
This course is designed to reinforce the classical culinary kitchen. Topics include the working Grand Brigade of the kitchen, signature dishes and classical banquets. Upon completion, students should be able to demonstrate competence in food preparation in a classical/upscale restaurant or banquet setting.

CUL 260 Baking II 1 4 0 3
Prerequisites: CUL 110 and CUL 160
Corequisites: None
This course is designed to further students' knowledge in ingredients, weights and measures, baking terminology and formula calculation. Topics include classical desserts, frozen desserts, cake and torte production, decorating and icings/glazes, dessert plating and presentation. Upon completion, students should be able to demonstrate pastry preparation, plating, and dessert buffet production skills.

CUL 270 Garde Manger II 1 4 0 3
Prerequisites: CUL 110, CUL 140, and CUL 170
Corequisites: None
This course is designed to further students' knowledge in basic cold food preparation techniques and pantry production. Topics include pates, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canapés, hors d'oevres, and related food items. Upon completion, students should be able to design, set up, and evaluate a catering/event display to include a cold buffet with appropriate showpieces.

CUL 287 Cultural Experience 2 2 0 3
Prerequisites: CUL 110, CUL 140, and CUL 240
Corequisites: None
This course is designed to provide the background cultural information necessary for students to maximize a cultural experience. Emphasis is placed on language skills, culture, culinary traditions and cuisines, and an appreciation of the local history. Upon

completion, students should exhibit an understanding of the unique character of the studied culture, specifically those relating to culinary arts.

DATABASE MANAGEMENT TECHNOLOGY (DBA Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
DBA	**110**	**Database Concepts**	2	3	0	3

Prerequisites: None
Corequisites: None
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.

DBA	**112**	**Database Utilization**	2	2	0	3

Prerequisites: CIS 110 or CIS 111 or OST 137
Corequisites: None
This course introduces basic database functions and uses. Emphasis is placed on database manipulation with queries, reports, forms, and some table creation. Upon completion, students should be able to enter and manipulate data from the end user mode.

DBA	**115**	**Database Applications**	2	2	0	3

Prerequisites: DBA 110
Corequisites: None
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.

DBA	**120**	**Database Programming I**	2	2	0	3

Prerequisites: None
Corequisites: None
This course is designed to develop SQL programming proficiency. Emphasis is placed on data definition, data manipulation, and data control statements as well as on report generation. Upon completion, students should be able to write programs which create, update, and produce reports

DBA	**192**	**Selected Topics in Database Management: Oracle Internet Application**	0	4	0	2

Prerequisites: DBA 120 and DBA 240
Corequisites: None
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

DBA	**193**	**Selected Topics in Database Management: Oracle Optimization**	2	2	0	3

Prerequisites: DBA 230, DBA 260
Corequisites: None
This course provides an opportunity to explore areas of current interest in Oracle optimization. Emphasis is placed on subject matter appropriate to computer programming. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

DBA	**210**	**Database Administration**	2	3	0	3

Prerequisites: DBA 110
Corequisites: None
This course covers database administration issues and distributed database concepts. Topics include: database administrator (DBA) goals and functions, backup and recovery, standards and procedures, training, and database security and performance evaluations. Upon completion, students should be able to produce functional DBA documentation and administer a database.

DBA	**220**	**Oracle DB Programming II**	2	2	0	3

Prerequisites: DBA 120
Corequisites: None
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.

DBA	**221**	**SQL Server DB Programming II**	2	2	0	3

Prerequisites: DBA 120
Corequisites: None
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop a SQL Server DBMS application which includes a GUI front-end and report generation.

DBA 222 DB2 DB Programming II 2 2 0 3
Prerequisites: DBA 120
Corequisites: None
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop a DB2 DBMS application which includes a GUI front-end and report generation.

DBA 223 MySQL DB Programming II 2 2 0 3
Prerequisites: DBA 120
Corequisites: None
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop a MySQL DBMS application which includes a GUI front-end and report generation.

DBA 224 SAS DB Programming II 2 2 0 3
Prerequisites: DBA 120
Corequisites: None
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop a SAS DBMS application which includes a GUI front-end and report generation.

DBA 230 Database in Corp Environs 3 0 0 3
Prerequisites: DBA 120 and DBA 240
Corequisites: None
This course covers database systems as they relate to the corporate environment. Topics include knowledge-based, decision-support, and expert systems; database choices; data warehousing; and corporate structure. Upon completion, students should be able to analyze and recommend database systems needed by a corporation.

DBA 240 Database Analysis/Design 2 3 0 3
Prerequisites: None
Corequisites: None
This course is an exploration of the established and evolving methodologies for the analysis, design, and development of a database system. Emphasis is placed on business data characteristics and usage, managing database projects, prototyping and modeling, and CASE tools. Upon completion, students should be able to analyze, develop, and validate a database implementation plan.

DBA 260 Oracle DBMS Admin 2 2 0 3
Prerequisites: DBA 120 and DBA 240
Corequisites: None
This course examines advanced Oracle database administration issues and distributed database concepts. Topics include backup and recovery, transporting of data between databases, database networking concepts, and resolution of database networking issues. Upon completion, students should be able to manage backup recovery and implement networked database solutions.

DBA 261 SQL Server DBMS Administration 2 2 0 3
Prerequisites: None
Corequisites: None
This course examines advanced SQL Server database administration issues and distributed database concepts. Topics include backup and recovery, transporting of data between databases, database networking concepts, and resolution of database networking issues. Upon completion, students should be able to manage backup recovery and implement networked database solutions.

DBA 262 DB2 DBMS Administration 2 2 0 3
Prerequisites: None
Corequisites: None
This course examines advanced DB2 database administration issues and distributed database concepts. Topics include backup and recovery, transporting of data between databases, database networking concepts, and resolution of database networking issues. Upon completion, students should be able to manage backup recovery and implement networked database solutions.

DBA 263 MySQL DBMS Admin 2 2 0 3
Prerequisites: DBA 120
Corequisites: None
This course examines advanced MySQL database administration issues and distributed database concepts. Topics include backup and recovery, transporting of data between databases, database networking concepts, and resolution of database networking issues. Upon completion, students should be able to manage backup recovery and implement networked database solutions.

DBA 264 SAS DBMS Administration 2 2 0 3
Prerequisites: None
Corequisites: None
This course examines advanced SAS database administration issues and distributed database concepts. Topics include backup and recovery, transporting of data between databases, database networking concepts, and resolution of database networking issues. Upon completion, students should be able to manage backup recovery and implement networked database solutions.

DBA 270 Oracle Performance Tuning 2 2 0 3
Prerequisites: NOS 130
Corequisites: None
This course covers Oracle performance tuning concepts and techniques. Topics include database tuning and Oracle performance tools. Upon completion, students should be able to configure and diagnose an Oracle database for optimal performance.

DESIGN DRAFTING (DDF Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
DDF	**211**	**Design Drafting I**	1	6	0	4

Prerequisites: None
Corequisites: None
This course emphasizes design processes for finished products. Topics include data collection from manuals and handbooks, efficient use of materials, design sketching, specifications, and vendor selection. Upon completion, students should be able to research and plan the design process for a finished product.

DDF 221 Design Drafting Project 0 4 0 2
Prerequisites: DFT 111, DFT 112, and DFT 151
Corequisites: None
This course incorporates ideas from concept to final design. Topics include reverse engineering, design for manufacturability, and mock-up construction. Upon completion, students should be able to generate working drawings and models based on physical design parameters.

DENTAL (DEN Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
DEN	**100**	**Basic Orofacial Anatomy**	2	0	0	2

Prerequisites: None
Corequisites: None
This course provides a basic introduction to the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to demonstrate knowledge of normal structures and development and how they relate to the practice of dental assisting.

DEN 101 Preclinical Procedures 4 6 0 7
Prerequisites: None
Corequisites: BIO 106, DEN 102, DEN 110, DEN 111
This course provides instruction in procedures for the clinical dental assistant as specified by the North Carolina Dental Practice Act. Emphasis is placed on orientation to the profession, infection control techniques, instruments, related expanded functions, and diagnostic, operative, and specialty procedures. Upon completion, students should be able to demonstrate proficiency in clinical dental assisting procedures.

DEN 102 Dental Materials 3 4 0 5
Prerequisites: None
Corequisites: BIO 106, DEN 101, DEN 110, DEN 111
This course provides instruction in identification, properties, evaluation of quality, principles, and procedures related to manipulation and storage of operative and specialty dental materials. Emphasis is placed on the understanding and safe application of materials used in the dental office and laboratory. Upon completion, students should be able to demonstrate proficiency in the laboratory and clinical application of routinely used dental materials.

DEN 103 Dental Sciences 2 0 0 2
Prerequisites: None
Corequisites: DEN 104, DEN 105, DEN 106, DEN 112
This course is a study of oral pathology, pharmacology, and dental office emergencies. Topics include oral pathological conditions, dental therapeutics, and management of emergency situations. Upon completion, students should be able to recognize abnormal oral conditions, identify classifications, describe actions and effects of commonly prescribed drugs, and respond to medical emergencies.

DEN 104 Dental Health Education 2 2 0 3
Prerequisites: DEN 101, DEN 111
Corequisites: DEN 103, DEN 105, DEN 106, DEN 112
This course covers the study of preventive dentistry to prepare dental assisting students for the role of dental health educator. Topics include etiology of dental diseases, preventive procedures, and patient education theory and practice. Upon completion, students should be able to demonstrate proficiency in patient counseling and oral health instruction in private practice or public health settings.

DEN 105 Practice Management 2 0 0 2
Prerequisites: None
Corequisites: DEN 103, DEN 104,DEN 106, DEN 112
This course provides a study of principles and procedures related to management of the dental practice. Emphasis is placed on maintaining clinical and financial records, patient scheduling, and supply and inventory control. Upon completion, students should be able to demonstrate fundamental skills in dental practice management.

DEN 106 Clinical Practice I 1 0 12 5
Prerequisites: DEN 101, DEN 111
Corequisites: DEN 102, DEN 104, DEN 112
This course is designed to provide experience assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions. Upon completion, students should be able to utilize classroom theory and laboratory and clinical skills in a dental setting.

DEN 107 Clinical Practice II 1 0 12 5
Prerequisites: DEN 106
Corequisites: None
This course is designed to increase the level of proficiency in assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions. Upon completion, students should be able to combine theoretical and ethical principles necessary to perform entry-level skills including functions delegable to a DA II.

DEN 110 Orofacial Anatomy 2 2 0 3
Prerequisites: None
Corequisites: None
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.

DEN 111 Infection/Hazard Control 2 0 0 2
Prerequisites: None
Corequisites: None
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.

DEN 112 Dental Radiography 2 3 0 3
Prerequisites: None
Corequisites: None
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.

DEN 120 Dental Hygiene Preclinical Lecture 2 0 0 2
Prerequisites: None
Corequisites: DEN 121
This course introduces preoperative and clinical dental hygiene concepts. Emphasis is placed on the assessment phase of patient care as well as the theory of basic dental hygiene instrumentation. Upon completion, students should be able to collect and evaluate patient data at a basic level and demonstrate knowledge of dental hygiene instrumentation

DEN 121 Dental Hygiene Preclinical Lab 0 6 0 2
Prerequisites: None
Corequisites: DEN 120
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.

DEN 123 Nutrition/Dental Health 2 0 0 2
Prerequisites: None
Corequisites: None
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.

DEN 124 Periodontology 2 0 0 2
Prerequisites: DEN 110
Corequisites: None
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.

DEN 125 Dental Office Emergencies 0 2 0 1
Prerequisites: None
Corequisites: None
This course provides a study of the management of dental office emergencies. Topics include methods of prevention, necessary equipment/drugs, medicolega considerations, recognition and effective initial management of a variety of emergencies. Upon completion, the student should be able to recognize, assess and manage various dental office emergencies and activate advanced

medical support when indicated.

DEN 130 Dental Hygiene Theory I 2 0 0 2
Prerequisites: DEN 120
Corequisites: DEN 131
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.

DEN 131 Dental Hygiene Clinic I 0 0 9 3
Prerequisites: DEN 121
Corequisites: DEN 130
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.

DEN 140 Dental Hygiene Theory II 1 0 0 1
Prerequisites: DEN 130
Corequisites: DEN 141
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.

DEN 141 Dental Hygiene Clinic II 0 0 6 2
Prerequisites: DEN 131
Corequisites: DEN 140
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.

DEN 220 Dental Hygiene Theory III 2 0 0 2
Prerequisites: DEN 140
Corequisites: DEN 221
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.

DEN 221 Dental Hygiene Clinic III 0 0 12 4
Prerequisites: DEN 141
Corequisites: DEN 220
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.

DEN 222 General and Oral Pathology 2 0 0 2
Prerequisites: BIO 163 or BIO 165 or BIO 168
Corequisites: None
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.

DEN 223 Dental Pharmacology 2 0 0 2
Prerequisites: None
Corequisites: BIO 163 or BIO 165 or BIO 168
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.

DEN 224 Materials and Procedures 1 3 0 2
Prerequisites: DEN 111
Corequisites: None
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.

DEN 230 Dental Hygiene Theory IV 1 0 0 1
Prerequisites: DEN 220
Corequisites: DEN 231
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.

DEN 231 Dental Hygiene Clinic IV 0 0 12 4
Prerequisites: DEN 221
Corequisites: DEN 230
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.

DEN 232 Community Dental Health 2 0 3 3
Prerequisites: None
Corequisites: None
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.

DEN 233 Professional Development 2 0 0 2
Prerequisites: None
Corequisites: None
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.

DESIGN: CREATIVE (DES Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
DES 125	**Graphic Presentation I**	0	6	0	2

Prerequisites: None
Corequisites: ARC 111 and DES 135
This course introduces graphic presentation techniques for communicating ideas. Topics include drawing, perspective drawing, and wet and dry media. Upon completion, students should be able to produce a pictorial presentation.

DES 135 Prin & Elem of Design I 2 4 0 4
Prerequisites: None
Corequisites: None
This course introduces the basic concepts and terminology of design as they relate to the design profession. Topics include line, pattern, space, mass, shape, texture, color, unity, variety, rhythm, emphasis, balance, proportion, scale, and function. Upon completion, students should be able to demonstrate an understanding of the principles covered through hands-on application.

DES 210 Bus Prac/Interior Design 2 0 0 2
Prerequisites: DES 125, DES 135, ARC 111
Corequisites: None
This course introduces contemporary business practices for interior design. Topics include employment skills, business formations, professional associations, preparation of professional contracts and correspondence, and means of compensation. Upon completion, students should be able to describe the basic business formations and professional associations and compose effective letters and contracts.

DES 220 Prin of Interior Design 1 6 0 3
Prerequisites: Take One Set: **Set One:** DES 135 and ARC 111, or DES 110, or DFT 110, **Set Two:** DES 125 and ARC 114
Corequisites: None
This course covers the basic principles of design as they relate specifically to interior design, furniture arrangement, wall composition, color, furnishings, collages, and illustration. Emphasis is placed on spatial relationships, craftsmanship, and visual presentation techniques. Upon completion, students should be able to arrange furnishings in rooms for various purposes, select furnishings and colors, and illustrate ideas graphically.

DES 225 Textiles/Fabrics 2 2 0 3
Prerequisites: None
Corequisites: None
This course includes the study of woven and non-woven fabrics for interiors. Topics include characteristics of fibers, yarns, weaving, felting, and knitting; processing of leather; and adorning and finishing of interior fabrics. Upon completion, students should be able to recognize and use correct terminology for upholstery, window treatments, and rugs/carpets with regard to flammability, performance, and durability.

DES 230 Residential Design I 1 6 0 3
Prerequisites: ARC 111, ARC 114, DES 125
Corequisites: None
This course includes principles of interior design for various residential design solutions. Emphasis is placed on visual presentation and selection of appropriate styles to meet specifications. Upon completion, students should be able to complete scaled floorplans, elevations, specifications, color schemes and fabrics, and finishes and furniture selection.

DES 235 Products 2 0 0 3
Prerequisites: ARC 111, DES 125
Corequisites: None
This course provides an overview of interior finishing materials and the selection of quality upholstery and case goods. Topics include hard and resilient floor coverings; wall coverings and finishes; ceilings, moldings, and furniture construction techniques; and other interior components. Upon completion, students should be able to recognize and use correct terminology, select appropriate materials for interior surfaces, and choose furniture based on sound construction.

DES 240 Comm/Contract Design I 1 6 0 3
Prerequisites: DES 220
Corequisites: ARC 131
This course introduces commercial/contract design including retail, office, institutional, restaurant, and hospitality design. Emphasis is placed on ADA requirements, building codes and standards, space planning, and selection of appropriate materials for non-residential interiors. Upon completion, students should be able to analyze and design introductory non-residential projects using graphic presentation concepts.

DES 255 History/Int & Furn I 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers interiors, exteriors, and furnishings from ancient Egypt through French Neo-Classicism. Emphasis is placed on vocabulary, chronology, and style recognition. Upon completion, students should be able to classify and date interior and exterior architecture and furnishings and be conversant with pertinent vocabulary.

DES 265 Lighting/Interior Design 2 0 0 2
Prerequisites: ARC 111, DES 125, DES 135
Corequisites: None
This course introduces theory and contemporary concepts in lighting. Topics include light levels, light quality, lamps and fixtures, and their use in interior design. Upon completion, students should be able to determine light levels and requirements based on national standards and select luminaries for specific light qualities.

DES 286 Interior Design/Advanced 1 6 0 3
Prerequisites: DES 230, DES 240
Corequisites: None
This course covers advanced techniques in designing either a residential or non-residential project: a residence, health care facility, retail establishment, or office complex. Emphasis is placed on the development of a total concept based on client profile and specifications and a presentation of appropriate and creative design solutions. Upon completion, students should be able to complete a detailed floorplan, space planning, furniture plan specifications, schedules, and detailed window treatments.

DRAFTING (DFT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
DFT 110	**Basic Drafting**	1	2	0	2

Prerequisites: None
Corequisites: None
This course introduces basic drafting skills, terminology, and applications. Topics include basic mathematics, sketching, introduction to CAD, ANSI and ISO drafting standards, and a survey of various drafting applications. Upon completion, students should be able to perform basic calculations for CAD drafting, sketch drawings using appropriate standards, and recognize drawings from different fields. This course is an introductory course utilizing AutoCAD software.

DFT 111 Technical Drafting I 1 3 0 2
Prerequisites: None
Corequisites: None
This course introduces basic drafting skills, equipment, and applications. Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorials drawings, sections, and auxiliary views. Upon completion, students should be able to understand and apply basic drawing principles and practices.

DFT 111A Technical Drafting I Lab 0 3 0 1
Prerequisites: None
Corequisites: DFT 111
This course provides a laboratory setting to enhance basic drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 111. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 111.

DFT 112 Technical Drafting II 1 3 0 2
Prerequisites: DFT 111
Corequisites: None
This course provides for advanced drafting practices and procedures. Topics include detailed working drawings, hardware, fits and tolerances, assembly and sub-assembly, geometric dimensioning and tolerancing, intersections, and developments. Upon completion, students should be able to produce detailed working drawings.

DFT 112A Technical Drafting II Lab 0 3 0 1
Prerequisites: None
Corequisites: DFT 112
This course provides a laboratory setting to enhance advance drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 112. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 112.

DFT 115 Architectural Drafting 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces basic drafting practices used in residential and light commercial design. Topics include floor plans, foundations, details, electrical components, elevations, and dimensioning practice. Upon completion, students should be able to complete a set of working drawings for a simple structure.

DFT 119 Basic CAD 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces computer-aided drafting software for specific technologies to non-drafting majors. Emphasis is placed on understanding the software command structure and drafting standards for specific technical fields. Upon completion, students should be able to create and plot basic drawings. This course is utilizes MicroStation software

DFT 120 Advanced CAD 1 2 0 2
Prerequisites: DFT 119
Corequisites: None
This course is designed for non-drafting majors to build upon basic computer-aided drafting skills by the use of application-specific assignments. Emphasis is placed on advanced 2D, 3D, isometric, and modeling applications via the CAD system. Upon completion, students should be able to generate, manage, and output engineering drawings via the computer, printer, and plotter. This course utilizes GEOPAK software.

DFT 121 Introduction to GD and T 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces basic geometric dimensioning and tolerancing principles. Topics include symbols, annotation, theory, and applications. Upon completion, students should be able to interpret and apply basic geometric dimensioning and tolerancing principles to drawings.

DFT 151 CAD I 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

DFT 152 CAD II 2 3 0 3
Prerequisites: DFT 151
Corequisites: None
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.

DFT 153 CAD III 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data.

DFT 154 Introduction to Solid Models/Rendering 2 3 0 3
Prerequisites: None
Corequisites: None
This course covers basic principles of three-dimensional CAD wireframe and surface models. Topics include user coordinate systems, three-dimensional viewpoints, three-dimensional wireframes, and surface components and viewpoints. Upon completion, students should be able to create and manipulate three-dimensional wireframe and surface models. This course is advanced solid modeling using ProE software.

DFT 170 Engineering Graphics 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces basic engineering graphics skills, equipment, and applications (manual and computer-aided). Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorial drawings, and sectional and auxiliary views. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices. This course utilizes Solidworks software.

DFT 214 Descriptive Geometry 1 2 0 2
Prerequisites: DFT 111, DFT 111A
Corequisites: None
This course includes a graphic analysis of space problems. Topics include points, lines, planes, connectors, and combinations of these. Upon completion, students should be able to solve real world spatial problems using descriptive geometry techniques.

DFT 221 Electrical Drafting 2 6 0 4
Prerequisites: DFT 111, DFT 111A, DFT 151
Corequisites: None
This course covers the practices used for making electrical drawings. Emphasis is placed on symbol identification and various types of electrical diagrams. Upon completion, students should be able to properly utilize electrical symbols in the construction of various electrical diagrams.

DRAMA/THEATRE (DRA Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
DRA	**111**	**Theatre Appreciation**	3	0	0	3

Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists.

DRA 112 Literature of the Theatre 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

DRA 115 Theatre Criticism 3 0 0 3
Prerequisites: DRA 111
Corequisites: None
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.

DRA 120 Voice for Performance 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides guided practice in the proper production of speech for the theatre. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective theatrical speech.

DRA 122 Oral Interpretation 3 0 0 3
Prerequisites: ENG 090 and RED 090 or ENG 111
Corequisites: None
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.

DRA 124 Readers Theatre 3 0 0 3
Prerequisites: ENG 090 and RED 090 or ENG 111
Corequisites: None
This course provides a theoretical and applied introduction to the medium of readers' theatre. Emphasis is placed on the group performance considerations posed by various genres of literature. Upon completion, students should be able to adapt and present a literary script following the conventions of readers' theatre.

DRA 126 Storytelling 3 0 0 3
Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: None
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.

DRA 128 Children's Theatre 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the philosophy and practice involved in producing plays for young audiences. Topics include the selection of age-appropriate scripts and the special demands placed on directors, actors, designers, and educators in meeting the needs of young audiences. Upon completion, students should be able to present and critically discuss productions for children.

DRA 130 Acting I 0 6 0 3
Prerequisites: None
Corequisites: None
This course provides an applied study of the actor's craft. Topics include role analysis, training the voice, and body concentration, discipline, and self-evaluation. Upon completion, students should be able to explore their creativity in an acting ensemble.

DRA 131 Acting II 0 6 0 3
Prerequisites: DRA 130
Corequisites: None
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.

DRA 132 Stage Movement 2 2 0 3
Prerequisites: None
Corequisites: DRA 111
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.

DRA 135 Acting for the Camera I 1 4 0 3
Prerequisites: DRA 130
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

DRA 140 Stagecraft I 0 6 0 3
Prerequisites: None
Corequisites: None
This course introduces the theory and basic construction of stage scenery and properties. Topics include stage carpentry, scene painting, stage electrics, properties, and backstage organization. Upon completion, students should be able to pursue vocational and avocational roles in technical theatre.

DRA 141 Stagecraft II 0 6 0 3
Prerequisites: DRA 140
Corequisites: None
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 a vocational roles in technical theatre.

DRA 145 Stage Make-up 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the research, design, selection of materials, and application of stage make-up, prosthetics, wigs, and hairpieces. Emphasis is placed on the development of techniques, style, and presentation of the finished make-up. Upon completion, students should be able to create and apply make-up, prosthetics, and hairpieces.

DRA 150 Stage Management 3 0 0 3
Prerequisites: DRA 140
Corequisites: None
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.

DRA 170 Play Production I 0 9 0 3
Prerequisites: None
Corequisites: None
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

DRA 171 Play Production II 0 9 0 3
Prerequisites: DRA 170
Corequisites: None
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

DRA 230 Acting III 0 6 0 3
Prerequisites: DRA 131
Corequisites: None
This course is designed to include an exploration of acting styles. Emphasis is placed on putting the actor's skills to work in a major

theatrical form—musical, comedy, or drama. Upon completion, students should be able to explore their creativity in an acting ensemble.

DRA 231 Acting IV 0 6 0 3
Prerequisites: DRA 230
Corequisites: None
This course is designed to include further exploration of acting styles. Emphasis is placed on putting the actor's skills to work in a major theatrical form—musical, comedy, or drama. Upon completion, students should be able to explore their creativity in an acting ensemble.

DRA 243 Scene Design 2 2 0 3
Prerequisites: DRA 140
Corequisites: None
This course covers the analysis, research, design, and problem solving related to scene design. Emphasis is placed on director/designer communication, concepting, researching, rendering, and modeling of designs. Upon completion, students should be able to demonstrate skills in communication, design process, rendering, and modeling.

DRA 260 Directing 0 6 0 3
Prerequisites: DRA 130
Corequisites: DRA 140
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.

DRA 270 Play Production III 0 9 0 3
Prerequisites: DRA 171
Corequisites: None
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

DRA 271 Play Production IV 0 9 0 3
Prerequisites: DRA 270
Corequisites: None
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.

ELECTRONIC COMMERCE (ECM Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ECM	**168**	**Electronic Business**	2	2	0	3

Prerequisites: None
Corequisites: None
This course provides a survey of the world of electronic business. Topics include the definition of electronic business, current practices as they evolve using Internet strategy in business, and application of basic business principles to the world of Electronic Commerce. Upon completion, students should be able to define electronic business and demonstrate an understanding of the benefits of Electronic Commerce as a foundation for developing plans leading to electronic business implementation.

ECM 210 Intro to Electronic Commerce 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to setup a working Electronic Commerce Internet web site. *This course is also available through the Virtual Learning Community (VLC).*

ECONOMICS (ECO Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ECO	**151**	**Survey of Economics**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces basic concepts of micro- and macroeconomics. Topics include supply and demand, optimizing economic behavior, prices and wages, money, interest rates, banking system, unemployment, inflation, taxes, government spending, and international trade. Upon completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

ECO 251 Principles of Microeconomics 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces economic analysis of individual, business, and industry choices in the market economy. Topics include the

price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives.

ECO 252 Principles of Macroeconomics 3 0 0 3
Prerequisites: None
Corequisites: None
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.

EDUCATION (EDU Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
EDU 113	**Family/Early Child Credentials**	2	0	0	2

Prerequisites: EDU 119
Corequisites: None
This course covers business/professional practices for family early childhood providers, developmentally appropriate practices, positive guidance, and methods of providing a safe and healthy environment. Topics include developmentally appropriate practices; health, safety and nutrition; and business and professionalism. Upon completion, students should be able to develop a handbook of policies, procedures, and practices for a family child care home.

EDU 114 Intro to Family Childcare 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080, MAT 060 **Set 2:** ENG 085, MAT 060
Corequisites: None
This course introduces the student to family child care home environments with emphasis on standards and developmentally effective approaches for supporting diverse children and families. Topics include standards for quality, curriculum for multiple age groups, authentic assessment methods, business practices, building positive family and community partnerships, and professionalism. Upon completion, students should be able to design a family child care handbook that reflects a healthy, respectful, supportive, and stimulating learning environment.

EDU 119 Intro to Early Child Educ 4 0 0 4
Prerequisites: None
Corequisites: None
This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for all children. Topics include historical foundations, program types, career options, professionalism and creating inclusive environments and curriculum responsive to the needs of all children and families. Upon completion, students should be able to design career plans and develop schedules, environments and activity plans appropriate for all children. *This course is also available through the Virtual Learning Community (VLC).*

EDU 131 Child, Family, & Commun 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080 **Set 2:** ENG 085
Corequisites: None
This course covers the development of partnerships between culturally and linguistically diverse families, children, schools and communities. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources. Upon completion, students should be able to explain appropriate relationships between families, educators, and professionals that enhance development and educational experiences of all children. *This course is also available through the Virtual Learning Community (VLC).*

EDU 144 Child Development I 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080
Set 2: ENG 085
Corequisites: None
This course includes the theories of child development, needs, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development. *This course is also available through the Virtual Learning Community (VLC).*

EDU 145 Child Development II 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080
Set 2: ENG 085, EDU 119
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

EDU 146 Child Guidance 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080
Set 2: ENG 085, EDU 119 or EDU 144 or EDU 145
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

EDU 151 Creative Activities 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080, EDU 119, EDU 144, EDU 145, EDU 146, EDU 157, and ENG 111
Set 2: ENG 085, EDU 119, EDU 144, EDU 145, EDU 146, EDU 157, and ENG 111
Corequisites: None
This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments. *This course is also available through the Virtual Learning Community (VLC).*

EDU 153 Health, Safety & Nutrit 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080
Set 2: ENG 085
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

EDU 157 Active Play 2 2 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080
Set 2: ENG 085
Corequisites: None
This course introduces the use of indoor and outdoor physical activities to promote the physical, cognitive, and social/emotional development of children. Topics include the role of active play, development of play skills, playground design, selection of safe equipment, and materials and surfacing for active play. Upon completion, students should be able to discuss the stages of play, the role of teachers in play, and the design of appropriate active play areas and activities.

EDU 163 Classroom Mgt & Instruct 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 080, RED 080
Set 2: ENG 085
Corequisites: None
This course covers management and instructional techniques with school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and instructional strategies that enhance the teaching/learning process and promote students' academic success.

EDU 184 Early Child Intro Pract 1 3 0 2
Prerequisites: Take one set **Set 1:** ENG 080, RED 080, EDU 119, EDU 131
Set 2: ENG 085, EDU 119, and EDU 131
Corequisites: None
This course introduces students to early childhood settings and applying skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on observing children and assisting in the implementation of developmentally appropriate activities/environments for all children; and modeling reflective/professional practices. Upon completion, students should be able to demonstrate developmentally appropriate interactions with children and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

EDU 188 Issues in Early Child Ed 2 0 0 2
Prerequisites: Take One Set: **Set 1:** ENG 080, RED 080, and EDU 119 or **Set 2:** ENG 085, EDU 119
Corequisites: None
This course covers topics and issues in early childhood education. Emphasis is placed on current advocacy issues, emerging technology, professional growth experiences, and other related topics. Upon completion, students should be able to list, discuss, and explain current topics and issues in early childhood education.

EDU 216 Foundations of Education *(replaced EDU 116)* 4 0 0 4
Prerequisites: ENG 090 and RED 090
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for*

transferability as a premajor and/or elective course requirement at select institutions only. This course is also available through the Virtual Learning Community (VLC).

EDU 221 Children with Exceptional 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU 144, EDU 145, and EDU 119
Set 2: ENG 090, RED 090, PSY 244 PSY 245, and EDU 119
Set 3: ENG 095, EDU 144 EDU 145, and EDU 119, or
Set 4: ENG 095, PSY 244 PSY 245 and EDU 119
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement at select institutions only. This course is also available through the Virtual Learning Community (VLC).*

EDU 234 Infants, Toddlers, & Twos 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU 119, EDU 144 or **Set 2:** ENG 095, EDU 119, EDU 144
Corequisites: None
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.

EDU 235 School-Age Dev & Program 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU 119 **Set 2:** ENG 095, EDU 119
Corequisites: None
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.

EDU 243 Learning Theory 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090 **Set 2:** ENG 095
Corequisites: None
This course provides lateral entry teachers an introduction to learning theory, various styles of learning, and motivational factors involved in the learning process. Emphasis is placed on the development of cognitive skills using the eight types of intelligence and applying these to practical classroom situations. Upon completion, students should be able to describe theories and styles of learning and discuss the relationship between different types of intelligence to learning motivation.

EDU 244 Human Growth/Development 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090 **Set 2:** ENG 095
Corequisites: None
This course introduces lateral entry teachers to theories and ages and stages related to human growth and development from birth through adolescence. Emphasis is placed on development through the stages of a child's life in the areas of physical, emotional, social, intellectual, and moral development. Upon completion, students should be able to identify and describe milestones of each stage in all areas of development and discuss factors that influence growth.

EDU 245 Policies and Procedures 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090 and RED 090
Set 2: ENG 095
Corequisites: None
This course is designed to introduce new lateral entry teachers to the policies and procedures established by the local education agency. Topics include emergency situation procedures, acceptable discipline, chain of command, role of mentors, evaluation procedures, employment requirements, dress codes, and other policies and procedures. Upon completion, students should be able to explain the policies and procedures to students, parents, or others and discuss the purpose of each policy category.

EDU 251 Exploration Activities 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU 151, ENG 112
Set 2: ENG 095, EDU 151,ENG 112
Corequisites: None
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.

EDU 261 Early Childhood Admin I 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090
Set 2: ENG 095
Corequisites: EDU 119
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. *This course is also available through the Virtual Learning Community (VLC).*

EDU 262 Early Childhood Admin II 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU 261
Set 2: ENG 095, EDU 261
Corequisites: EDU 119
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. *This course is also available through the Virtual Learning Community (VLC).*

EDU 263 School-Age Program Admin 2 0 0 2
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU 119
Set 2: ENG 095, AND EDU 119
Corequisites: None
This course introduces the methods and procedures for development and administration of school-age programs in the public or proprietary setting. Emphasis is placed on the construction and organization of the physical environment. Upon completion, students should be able to plan, develop and administer a quality school-age program.

EDU 271 Educational Technology 2 2 0 3
Prerequisites: CIS 111, ENG 112, PSY 150, and BIO 110 or MAT 140, or GEL 120
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

EDU 280 Language & Literacy Exp 3 0 0 3
Prerequisites: EDU 282
Corequisites: None
This course is designed to expand students' understanding of children's language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations/assessments and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate and diverse language/literacy experiences. *This course is also available through the Virtual Learning Community (VLC).*

EDU 282 Early Childhood Lit 3 0 0 3
Prerequisites: Take One Set: **Set 1:** ENG-090 and RED-090, EDU 119, EDU 144, EDU 145, EDU 146, ENG 111
Set 2: ENG-095 and EDU 119, EDU 144, EDU 145, EDU 146, ENG 111
Corequisites: None
This course covers the history, selection, and integration of literature and language in the early childhood curriculum. Topics include the history and selection of developmentally appropriate children's literature and the use of books and other media to enhance language and literacy in the classroom. Upon completion, students should be able to select appropriate books for storytelling, reading aloud, puppetry, flannel board use, and other techniques.

EDU 284 Early Child Capstone Prac 1 9 0 4
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU119, EDU 144, EDU 145, EDU 146, EDU 151, EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Set 2: ENG 090, RED 090, EDU 119, PSY 244, PSY 245, EDU 146, EDU 151, EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Set 3: ENG 090, RED 090, EDU 119, PSY 245, EDU 144, EDU 146, EDU 151, EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Set 4: ENG 090, RED 090, EDU 119, PSY 244, EDU 145, EDU 146, EDU 151, EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Set 5: ENG 095, EDU 119, EDU 144, EDU 145, EDU 146, EDU 151, EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Set 6: ENG 095, EDU 119, PSY 244, PSY 245, EDU 146, EDU 151, EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Set 7: ENG 095, EDU 119, EDU 144, PSY 245, EDU 146, EDU 151 , EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Set 8: ENG 095, EDU 119, EDU 145, PSY 244, EDU 146, EDU 151, EDU 131, EDU 221, EDU 251, EDU 261, EDU 282
Corequisites: None
This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visit.

EDU 287 Leadership/Early Child Ed 3 0 0 3
Prerequisites: Take one set **Set 1:** ENG 090, RED 090, EDU 119, EDU 131, EDU 144, EDU 145, EDU 251, EDU 261, EDU 282
Set 2: ENG 090, RED 090, EDU 119, EDU 131, PSY 244, PSY 245, EDU 251, EDU 261, EDU 282
Set 3: ENG 095, EDU 119, EDU 131, EDU 144, EDU 145, EDU 251, EDU 261, EDU 282
Set 4: ENG 095, EDU 119, EDU 131, PSY 244, PSY 245, EDU 251, EDU 261, EDU 282
Corequisites: None
This course is designed to facilitate and guide the development of early childhood professionals preparing for leadership roles in improving community early childhood services. Topics include principles of social change, characteristics of effective leaders, techniques of action research, childcare funding mechanisms, quality initiatives, and key issues in early care. Upon completion, students should be able to identify key issues; develop strategic plans; establish relationships with community leaders; and identify opportunities and barriers for advocacy.

ENGLISH AS A FOREIGN LANGUAGE (EFL Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
EFL	**001**	**Skills Lab**	-	-	-	-

Prerequisites: None
Corequisites: None
This skills lab provides supplemental instruction to non-native speakers of English enrolled in pre-curriculum and curriculum classes. The skills lab requires instructor referrals.

EFL 030 English for Special Purposes 3 0 0 3
Prerequisites: None
Corequisites: None
This course will provide instruction in academic and professional language for non-native speakers of English. Emphasis is placed on development of integrated language use for carrying out a specific academic task. Upon completion, students should be able to demonstrate improved language skills for participation and success within the particular topic area. This 3-credit elective is appropriate for students who would like to improve accuracy and fluency in spelling and reading of academic English.

EFL 050 English for Academic Purposes 5 0 0 5
Prerequisites: None
Corequisites: None
This course will provide instruction in academic and professional language skills for non-native speakers of English. Emphasis is placed on development of integrated language skills for use in studying a particular content area. Upon completion, students should be able to demonstrate improved academic language, content-specific vocabulary and skills, and cultural knowledge in the topic area. This-5 credit elective is appropriate for students who would like to improve pronunciation of academic English.

EFL 061 Listening/Speaking I 5 0 0 5
Prerequisites: None
Corequisites: None
This course is designed to provide the basic oral/aural language skills needed for essential daily conversation on campus and in the community. Emphasis is placed on vocabulary building, communication in various social and academic situations, and various spoken grammatical skills. Upon completion, students should be able to produce and understand English dealing with routine topics using basic syntax and vocabulary skills. This course is intended for non-native speakers of English.

EFL 062 Listening/Speaking II 5 0 0 5
Prerequisites: EFL 061
Corequisites: None
This course is designed to enhance intermediate listening and speaking skills of non-native speakers of English. Emphasis is placed on the ability to hold extended conversation and on the ability to understand extended spoken discourse. Upon completion, students should be able to demonstrate improved listening skills and strategies in a variety of settings.

EFL 063 Listening/Speaking III 5 0 0 5
Prerequisites: EFL 062
Corequisites: None
This course is designed to increase the ability and confidence of high intermediate-level non-native speakers of English in verbal expression and listening comprehension. Emphasis is placed on listening/speaking skills which would be appropriate for group discussions, oral presentations, and note taking. Upon completion, students should be able to successfully participate in high intermediate-level listening and speaking activities.

EFL 064 Listening/Speaking IV 5 0 0 5
Prerequisites: EFL 063
Corequisites: None
This course is designed to prepare advanced-level non-native speakers of English for academic and professional speaking and listening activities. Emphasis is placed on learning and practicing strategies of effective oral expression and comprehension of spoken discourse in informal and formal settings. Upon completion, students should be able to effectively participate in activities appropriate to academic and professional settings.

EFL 071 Reading I 5 0 0 5
Prerequisites: None
Corequisites: None
This course is designed to help those with literacy skills achieve reading fluency in English at the beginning level. Emphasis is

placed on basic academic and cultural vocabulary and reading strategies which include self-monitoring, and recognizing organizational styles and context clues. Upon completion, students should be able to use these strategies to read and comprehend basic academic, narrative, and expository texts. This course is intended for non-native speakers of English.

EFL 072 Reading II 5 0 0 5
Prerequisites: EFL 071
Corequisites: None
This course provides preparation in academic and general purpose reading in order to achieve reading fluency at the low-intermediate level. Emphasis is placed on expanding academic and cultural vocabulary and developing effective reading strategies to improve comprehension and speed. Upon completion, students should be able to read and comprehend narrative and expository texts at the low-intermediate instructional level. This course is intended for non-native speakers of English.

EFL 073 Reading III 5 0 0 5
Prerequisites: EFL 072
Corequisites: None
This course is designed to develop fundamental reading and study strategies at the intermediate level needed for curriculum programs. Emphasis is placed on building vocabulary and cultural knowledge, improving comprehension, and developing study strategies on basic-level college materials and literary works. Upon completion, students should be able to read and comprehend narrative and expository texts at the intermediate instructional level. This course is intended for non-native speakers of English.

EFL 074 Reading IV 5 0 0 5
Prerequisites: EFL 073
Corequisites: None
This course is designed to enhance the academic reading skills for successful reading ability as required in college-level courses. Emphasis is placed on strategies for effective reading and the utilization of these strategies to improve comprehension, analytical skills, recall, and overall reading speed. Upon completion, students should be able to comprehend, synthesize, and critique multi-disciplinary college- level reading/textbook materials. This course is intended for non-native speakers of English.

EFL 081 Grammar I 5 0 0 5
Prerequisites: None
Corequisites: EFL 091
This course provides non-native speakers of English with a variety of fundamental grammatical concepts which enrich language skills and comprehension. Emphasis is on key basic grammatical structures and opportunities for practice which incorporate grammatical knowledge into various skills areas. Upon completion, students should be able to demonstrate comprehension and correct usage of specified grammatical concepts.

EFL 082 Grammar II 5 0 0 5
Prerequisites: EFL 081
Corequisites: None
This course provides non-native speakers of English with a variety of basic grammatical concepts which enrich language skills and comprehension. Emphasis is on key low-intermediate grammatical structures and opportunities for practice which incorporate grammatical knowledge into various skills areas. Upon completion, students should be able to demonstrate by written and oral means the comprehension and correct usage of specified grammatical concepts.

EFL 083 Grammar III 5 0 0 5
Prerequisites: EFL 082
Corequisites: None
This course is designed to provide high-intermediate non-native speakers of English with a knowledge of grammatical structures that improves academic communication. Emphasis is placed on using high-intermediate grammatical structures in meaningful contexts through exercises integrating the use of newly acquired structures with previously learned structures. Upon completion, students should be able to demonstrate improved proficiency, comprehension, and grammatical accuracy.

EFL 084 Grammar IV 5 0 0 5
Prerequisites: EFL 083
Corequisites: None
This course is designed to give non-native speakers of English a full understanding of advanced grammatical structures and techniques. Emphasis is placed on oral and written communicative fluency through the study of advanced grammatical forms. Upon completion, students should be able to incorporate the structures covered in both spoken and written form, demonstrating improved proficiency, comprehension, and grammatical accuracy.

EFL 091 Composition I 5 0 0 5
Prerequisites: None
Corequisites: EFL 081
This course introduces basic sentence structure and writing paragraphs. Emphasis is placed on word order, verb tense-aspect system, auxiliaries, word forms, and simple organization and basic transitions in writing paragraphs. Upon completion, students should be able to demonstrate a basic understanding of grammar and ability to write English paragraphs using appropriate vocabulary, organization, and transitions. This course is intended for non-native speakers of English.

EFL 092 Composition II 5 0 0 5
Prerequisites: EFL 091
Corequisites: None
This course provides preparation in low-intermediate academic and general-purpose writing. Emphasis is placed on writing as a process, paragraph development, and basic essay organization. Upon completion, students should be able to write and

independently edit and understand the major elements of the writing process, sentence, paragraph, and essay. This course is intended for non-native speakers of English.

EFL 093 Composition III 5 0 0 5
Prerequisites: EFL 092
Corequisites: None
This course covers intermediate-level academic and general-purpose writing. Emphasis is placed on the writing process, content, organization, and language use in formal academic compositions in differing rhetorical modes. Upon completion, students should be able to effectively use the writing process in a variety of rhetorical modes. This course is intended for non-native speakers of English.

EFL 094 Composition IV 5 0 0 5
Prerequisites: EFL 093
Corequisites: None
This course prepares low-advanced non-native speakers of English to determine the purpose of their writing and to write paragraphs and essays to fulfill that purpose. Emphasis is placed on unity, coherence, completeness, audience, and the writing process; and the grammatical forms and punctuation appropriate for each kind of writing. Upon completion, students should be able to write unified, coherent, and complete paragraphs and essays which are grammatical and appropriate for the intended audience. This course is intended for non-native speakers of English.

EFL 095 Composition V 5 0 0 5
Prerequisites: EFL 094
Corequisites: None
This course is designed to prepare advanced non-native speakers of English for college-level composition courses. Emphasis is placed on the study and process of writing formal essays and research papers and the analysis of literary, expository, and descriptive writings. Upon completion, students should be able to write and analyze professional and peer compositions and apply basic research principles. This course is intended for non-native speakers of English.

ENGINEERING (EGR Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
EGR 115	**Introduction to Technology**	2	3	0	3

Prerequisites: None
Corequisites: None
This course introduces the basic skills and career fields for technicians. Topics include career options, technical vocabulary, dimensional analysis, measurement systems, engineering graphics, calculator applications, professional ethics, safety practices, and other related topics. Upon completion, students should be able to demonstrate an understanding of the basic technologies, prepare drawings and sketches, and perform computations using a scientific calculator. This course is an introduction to CAD using AutoCAD software.

EGR 120 Eng and Design Graphics 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the graphical tools used for engineering and design communications. Emphasis is placed upon selecting the appropriate methods and tools and conveying ideas using sketches, orthographic views and projections, and computer graphics applications. Upon completion, students should be able to communicate essential features of two-dimensional and three-dimensional objects using the proper tools and methods.

EGR 125 Appl Software for Tech 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces personal computer software and teaches students how to customize the software for technical applications. Emphasis is placed on the use of common office applications software such as spreadsheets, word processing, graphics, and Internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

EGR 130 Engineering Cost Control 2 2 0 3
Prerequisites: MAT 121, MAT 161, or MAT 171
Corequisites: None
This course covers the management of projects and systems through the control of costs. Topics include economic analysis of alternatives within budget constraints and utilization of the time value of money approach. Upon completion, students should be able to make choices that optimize profits on both short-term and long-term decisions.

EGR 131 Introduction to Electronics Technology 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces the basic skills required for electrical/electronics technicians. Topics include soldering/ desoldering, safety practices, test equipment, scientific calculators, AWG wire table, the resistor color code, electronic devices, problem solving, and use of hand tools. Upon completion, students should be able to solder/desolder, operate test equipment, apply problem-solving techniques, and use a scientific calculator.

EGR 150 Intro to Engineering 1 2 0 2
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

EGR 220 Engineering Statics 3 0 0 3
Prerequisites: A grade of "C" or better in PHY 251 or MAT 272
Corequisites: None
This course introduces the concepts of engineering based on forces in equilibrium. Topics include concentrated forces, distributed forces, forces due to friction, and inertia as they apply to machines, structures, and systems. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

EGR 225 Engineering Dynamic 3 0 0 3
Prerequisites: EGR 220
Corequisites: MAT 273
This course introduces the concepts of engineering based on the analysis of motion in Cartesian, cylindrical, and Spherical coordinate systems. Topics include the two and three dimensional motion of particles and rigid bodies, the forces associated with that motion, and relative motion between two coordinate systems. Upon completion, students should be able to solve problems which require the ability to analyze the motion and forces involved in a dynamic system. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

EGR 285 Design Project 0 4 0 2
Prerequisites: None
Corequisites: None
This course provides the opportunity to design an instructor-approved project using previously acquired skills. Emphasis is placed on selection, proposal, design, testing, and documentation of the approved project. Upon completion, students should be able to present and demonstrate projects.

ELECTRICITY (ELC Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
ELC 111	**Introduction to Electricity**	2	2	0	3

Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronic majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

ELC 112 DC/AC Electricity 3 6 0 5
Prerequisites: None
Corequisites: None
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.

ELC 113 Basic Wiring I 2 6 0 4
Prerequisites: None
Corequisites: None
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.

ELC 114 Basic Wiring II 2 6 0 4
Prerequisites: ELC 113
Corequisites: None
This course provides instruction in the application of electrical tools, materials, and test equipment associated with electrical installations. Topics include the NEC; safety; electrical blueprints; planning, layout, and installation of equipment and conduits; and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with electrical installations.

ELC 115 Industrial Wiring 2 6 0 4
Prerequisites: ELC 114
Corequisites: None
This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment.

ELC 117 Motors and Controls 2 6 0 4
Prerequisites: ELC 111, ELC 112, or ELC 131
Corequisites: None
This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contactors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits.

ELC 118 National Electrical Code 1 2 0 2
Prerequisites: None
Corequisites: ELC 113
This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.

ELC 119 NEC Calculations 1 2 0 2
Prerequisites: ELC 118
Corequisites: None
This course covers branch circuit, feeder, and service calculations. Emphasis is placed on sections of the National Electrical Code related to calculations. Upon completion, students should be able to use appropriate code sections to size wire, conduit, and overcurrent devices for branch circuits, feeders, and service.

ELC 121 Electrical Estimating 1 2 0 2
Prerequisites: ELC 113, ELC 114
Corequisites: None
This course covers the principles involved in estimating electrical projects. Topics include take-offs of materials and equipment, labor, overhead, and profit. Upon completion, students should be able to estimate simple electrical projects.

ELC 126 Electrical Computations 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the fundamental applications of mathematics that are used by an electrical/electronics technician. Topics include whole numbers, fractions, decimals, powers, roots, simple electrical formulas, and usage of a scientific calculator. Upon completion, students should be able to solve simple electrical mathematical problems.

ELC 127 Software for Technicians 1 3 0 2
Prerequisites: None
Corequisites: None
This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations and applications. Upon completion, students should be able to utilize a personal computer for electrical/electronics- related applications.

ELC 128 Intro to PLC 2 3 0 3
Prerequisites: ELC 117 or ELC 131
Corequisites: None
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.

ELC 131 DC/AC Circuit Analysis 4 3 0 5
Prerequisites: None
Corequisites: None
This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.

ELC 134 Transformer Applications 1 2 0 2
Prerequisites: ELC 112
Corequisites: ELC 117
This course covers single and three phase transformer applications as found in industrial/commercial buildings and machinery. Topics include transformer principles, single and three phase calculations, and connections. Upon completion, students should be able to understand single and three phase transformers, make transformer connections, and make calculations.

ELC 229 Applications Project 1 3 0 2
Prerequisites: ELC 113, ELC 128, ELN 133, and ELN 229
Corequisites: None
This course provides an individual and/or integrated team approach to a practical project as approved by the instructor. Topics include project selection and planning, implementation and testing, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented project.

ELC 231 Electric Power Systems 3 2 0 4
Prerequisites: None
Corequisites: None
This course covers the basic principles of electric power systems, including transmission lines, generator and transformer

characteristics, and fault detection and correction. Emphasis is placed on line diagrams and per unit calculations for circuit performance analysis in regards to voltage regulation, power factor, and protection devices. Upon completion, students should be able to analyze simple distribution subsystems, calculate fault current, and compare different types and sizes of circuit protection devices.

ELC 233 Energy Management 2 2 0 3
Prerequisites: None
Corequisites: None
This course covers energy management principles and techniques typical of those found in industry and commercial facilities, including load control and peak demand reduction systems. Topics include load and peak demand calculations, load shedding, load balance and power factor, priority scheduling, remote sensing and control, and supplementary/alternative energy sources. Upon completion, students should be able to determine energy management parameters, calculate demand and energy use, propose energy management procedures, and implement alternative energy sources.

ELECTRONICS (ELN Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
ELN 112	**Diesel Electronics System**	2	6	0	4

Prerequisites: None
Corequisites: None
This course introduces electronic theory and applications as used in medium and heavy duty vehicles. Emphasis is placed on the basic function and operation of semiconductor and integrated circuits. Upon completion, students should be able to identify electronic components, explain their use and function, and use meters and flow charts to diagnose and repair systems.

ELN 113 Electronic Fuel Injection 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the function of the various sensors used to provide feedback control to current model diesel engines. Emphasis is placed on the operation of ECM-controlled fuel injectors and testing using current industry methods. Upon completion, students should be able to obtain information from the electronic fuel system using current test programs, fault tree, and digital meters.

ELN 116 Telecommunications Digital Logic 3 3 0 4
Prerequisites: None
Corequisites: None
This course covers the application of binary logic circuits to digital systems. Emphasis is placed on circuits that are utilized in telecom systems. Upon completion, students will be able to construct, analyze, verify, and troubleshoot telecom digital systems using appropriate techniques and test equipment.

ELN 131 Electronics Devices 3 3 0 4
Prerequisites: None
Corequisites: ELC 112, ELC 131, or ELC 140
This course includes semiconductor-based devices such as diodes, bipolar transistors, FETs, thermistors, and related components. Emphasis is placed on analysis, selection, biasing, and applications in power supplies, small signal amplifiers, and switching and control circuits. Upon completion, students should be able to construct, analyze, verify, and troubleshoot discrete component circuits using appropriate techniques and test equipment.

ELN 132 Linear IC Applications 3 3 0 4
Prerequisites: ELN 131
Corequisites: None
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.

ELN 133 Digital Electronics 3 3 0 4
Prerequisites: None
Corequisites: None
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, AD/DA conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment. *This course is also available through the Virtual Learning Community (VLC).*

ELN 136 Telecommunications Digital Systems 3 3 0 4
Prerequisites: None
Corequisites: None
This course covers the applications of microprocessors in digital communication circuits. Emphasis is placed on interfacing I/O peripherals, data communication circuits, DSP circuits, UART's modems, and other communication circuits. Upon completion, students will be able to design, construct, verify, analyze, and troubleshoot using appropriate techniques and test equipment.

ELN 150 CAD for Electronics 1 3 0 2
Prerequisites: CIS 110, CIS 111, or ELC 127
Corequisites: None
This course introduces computer-aided drafting (CAD) with an emphasis on applications in the electronics field. Topics include electronics industry standards (symbols, schematic diagrams, layouts); drawing electronic circuit diagrams; and specialized

electronic drafting practices and components such as resistors, capacitors, and ICs. Upon completion, students should be able to prepare electronic drawings with CAD software.

ELN 154 Intro to Data Comm 2 3 0 3
Prerequisites: ELN 133
Corequisites: None
This course introduces the principal elements and theory (analog and digital techniques) of data communication systems and how they are integrated as a complete network. Topics include an overview of data communication, OSI model, transmission modes, interfaces, applications of ICs, protocols, network configurations, modems, and related applications. Upon completion, students should be able to demonstrate knowledge of the concepts associated with data communication systems and high speed networks.

ELN 193A Selected Topics in Electronics Engineering Technology 2 3 0 3
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Electronics Engineering Technology. Emphasis is placed on subject matter appropriate to electronics engineering technology. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ELN 229 Industrial Electronics 3 3 0 4
Prerequisites: ELC 112
Corequisites: None
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.

ELN 229A Industrial Electronics Part 1 3 0 0 3
Prerequisites: ELC 112
Corequisites: None
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. This is part one of a two-part course.

ELN 229B Industrial Electronics Part 2 0 3 0 1
Prerequisites: ELN 229A
Corequisites: None
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. This is part two of a two-part course.

ELN 231 Industrial Controls 2 3 0 3
Prerequisites: ELC 112 or ELC 131 or ELC 140
Corequisites: None
This course introduces the fundamental concepts of solid-state control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret ladder diagrams and demonstrate an understanding of electromechanical and electronic control of rotating machinery.

ELN 232 Introduction to Microprocessors 3 3 0 4
Prerequisites: ELN 133
Corequisites: None
This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include assembly language programming, bus architecture, bus cycle types, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment.

ELN 233 Microprocessor Systems 3 3 0 4
Prerequisites: ELN 232
Corequisites: None
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.

ELN 234 Communication Systems 3 3 0 4
Prerequisites: ELN 132 or ELN 140
Corequisites: None
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.

ELN 235 Data Communication System 3 3 0 4
Prerequisites: None
Corequisites: None
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.

ELN 236 Fiber Optics and Lasers 3 2 0 4
Prerequisites: None
Corequisites: None
This course introduces the fundamentals of fiber optics and lasers. Topics include the transmission of light; characteristics of fiber optic and lasers and their systems; fiber optic production; types of lasers; and laser safety. Upon completion, students should be able to understand fiber optic communications and basic laser fundamentals.

ELN 237 Local Area Networks 2 3 0 3
Prerequisites: CIS 110 or CIS 111 or CET 111 or ELC 127
Corequisites: None
This course introduces the fundamentals of local area networks and their operation in business and computer environments. Topics include the characteristics of network topologies, system hardware (repeaters, bridges, routers, gateways), system configuration, and installation and administration of the LAN. Upon completion, students should be able to install, maintain, and manage a local area network.

ELN 252 Introduction to Communication Protocols 2 3 0 3
Prerequisites: TNE 111, TNE 231
Corequisites: None
This course introduces various communication protocols and their place within the OSI Model. Topics include background information, historical protocols, various individual physical, link and network layer protocols, and the integration of individual layer protocols. Upon completion, students should be able to effectively use existing and future communication protocols. Emphasis will be placed on data communications over WAN.

ELN 275 Troubleshooting 1 3 0 2
Prerequisites: None
Corequisites: ELN 133
This course covers techniques of analyzing and repairing failures in electronic equipment. Topics include safety, signal tracing, use of service manuals, and specific troubleshooting methods for analog, digital, and other electronics-based circuits and systems. Upon completion, students should be able to logically diagnose and isolate faults and perform necessary repairs to meet manufacturers' specifications.

EMERGENCY MEDICAL CARE (EMS Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
EMS	**110**	**EMT-Basic**	5	6	0	7

Prerequisites: ENG 090 and RED 090 or ENG-111
Corequisites: None
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.

EMS 110A EMT-Basic Part 1 2 3 0 3
Prerequisites: None
Corequisites: None
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. *This course is offered only for Huskins eligible high school students.*

EMS 110B EMT-Basic Part 2 3 3 0 4
Prerequisites: EMS 110A
Corequisites: None
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. *This course is offered only for Huskins eligible high school students.*

EMS 120 Intermediate Interventions 2 3 0 3
Prerequisites: EMS 110
Corequisites: EMS 121, EMS 130, EMS 131
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, utilize AEDs, and correctly interpret arterial blood gases.

EMS 121 EMS Clinical Practicum I 0 0 6 2
Prerequisites: EMS 110
Corequisites: EMS 120, EMS 130, EMS 131
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.

EMS 125 EMS Instructor Methodology 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the information needed to develop and instruct EMS courses. Topics include instructional methods, lesson plan development, time management skills, and theories of adult learning. Upon completion, students should be able to teach EMS courses and meet the North Carolina EMS requirements for instructor methodology. *Students must be admitted into the Emergency Medical Science program to be able to register for this course.*

EMS 130 Pharmacology I for EMS 1 3 0 2
Prerequisites: EMS 110
Corequisites: EMS 120, EMS 131
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.

EMS 131 Advanced Airway Management 1 2 0 2
Prerequisites: EMS 110
Corequisites: EMS 120, EMS 130
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.

EMS 140 Rescue Scene Management 1 3 0 2
Prerequisites: None
Corequisites: None
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 must be admitted into the Emergency Medical Science program to be able to register for this course.*

EMS 150 Emerg Vehicles & EMS Comm 1 3 0 2
Prerequisites: None
Corequisites: None
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. *Students must be admitted into the Emergency Medical Science program to be able to register for this course.*

EMS 210 Advanced Patient Assessment 1 3 0 2
Prerequisites: EMS 120, EMS 121, EMS 130, EMS 131
Corequisites: None
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.

EMS 220 Cardiology 2 6 0 4
Prerequisites: EMS 120, EMS 130, EMS 131
Corequisites: None
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.

EMS 221 EMS Clinical Practicum II 0 0 9 3
Prerequisites: EMS 121
Corequisites: None
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.

EMS 230 Pharmacology II for EMS 1 3 0 2
Prerequisites: EMS 130
Corequisites: None
This course explores the fundamental classification and action of common pharmacologic agents. Emphasis is placed on the action and use of compounds most commonly encountered in the treatment of chronic and acutely ill patients. Upon completion, students

should be able to demonstrate general knowledge of drugs covered during the course.

EMS 231 EMS Clinical Practicum III 0 0 9 3
Prerequisites: EMS 221 or EMS 222 and COE 121
Corequisites: None
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.

EMS 235 EMS Management 2 0 0 2
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

EMS 240 Special Needs Patients 1 2 0 2
Prerequisites: EMS 120, EMS 121 or EMS 122 and EMS 130, and EMS 131
Corequisites: None
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.

EMS 241 EMS Clinical Practicum IV 0 0 9 3
Prerequisites: EMS 231 or EMS 232 and COE 131
Corequisites: None
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.

EMS 250 Advanced Medical Emergencies 2 3 0 3
Prerequisites: EMS 120, EMS 130, EMS 131,and either EMS 121 or EMS 122
Corequisites: None
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.

EMS 260 Advanced Trauma Emergencies 1 3 0 2
Prerequisites: EMS 120, EMS 130, EMS 131, and either EMS 121 or COE 111 and EMS 122
Corequisites: None
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 problems 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.

EMS 270 Life Span Emergencies 2 2 0 3
Prerequisites: EMS 120, EMS 130, EMS 131
Corequisites: None
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.

EMS 285 EMS Capstone 1 3 0 2
Prerequisites: EMS 220, EMS 250, EMS 260
Corequisites: None
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.

ENGLISH (ENG Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
ENG 001	**Writing Skills Lab**	-	-	-	-

Prerequisites: None
Corequisites: None
Designed to support courses across the curriculum that require writing by providing assistance to help students overcome deficiencies in organization and development, grammar and usage, mechanics, sentence structure and style, literary analysis and documentation.

ENG 070 Basic Language Skills 2 2 0 3
Prerequisites: None
Corequisites: None
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 a variety of sentences that clearly express ideas. Regular readings will provide the basis for frequent writing practice.

ENG 075 Reading and Language Essentials 5 0 0 5
Prerequisites: None
Corequisites: None
This course uses whole language to develop proficiency in basic reading and writing. Emphasis is placed on increasing vocabulary, developing comprehension skills, and improving grammar. Upon completion, students should be able to understand and create grammatically and syntactically correct sentences.

ENG 075A Reading and Language Essentials Lab 0 2 0 1
Prerequisites: None
Corequisites: ENG 075
This laboratory provides the opportunity to practice the skills introduced in ENG 075. Emphasis is placed on practical skills for increasing vocabulary, developing comprehension skills, and improving grammar. Upon completion, students should be able to apply those skills in the production of grammatically and syntactically correct sentences.

ENG 080 Writing Foundations 3 2 0 4
Prerequisites: ENG 070 or ENG 075 or placement
Corequisites: None
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. Regular readings will provide the basis for additional, less structured writing practice.

ENG 090 Composition Strategies 3 0 0 3
Prerequisites: ENG 080 or ENG 085 or placement
Corequisites: None
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.

ENG 090A Composition Strategies Lab 0 2 0 1
Prerequisites: ENG 080 or ENG 085 or placement
Corequisites: ENG 090
This writing lab is designed to practice the skills introduced in ENG 090. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay.

ENG 110 Freshman Composition 3 0 0 3
Prerequisites: ENG 090 and RED 080
Corequisites: None
This course is designed to develop informative and business writing skills. Emphasis is placed on logical organization of writing, including effective introductions and conclusions, precise use of grammar, and appropriate selection and use of sources. Upon completion, students should be able to produce clear, concise, well-organized short papers.

ENG 111 Expository Writing 3 0 0 3
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
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 will also introduce students to the skills needed to produce a college-level research essay.

ENG 111A Expository Writing Lab 0 2 0 1
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: ENG 111
This writing laboratory is designed to apply the skills introduced in ENG 111. Emphasis is placed on the editing and revision components of the writing process. Upon completion, students should be able to apply those skills in the production of final drafts in ENG 111.

ENG 112 Argument-Based Research 3 0 0 3
Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
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.

ENG 113 Literature-Based Research 3 0 0 3
Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. This course may include a variety of critical approaches.

ENG 114 Professional Research and Reporting 3 0 0 3
Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. This course is also available through the Virtual Learning Community (VLC).*

ENG 125 Creative Writing I 3 0 0 3
Prerequisites: ENG 111
Corequisites: ENG 112, ENG 113, or ENG 114
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.

ENG 126 Creative Writing II 3 0 0 3
Prerequisites: ENG 125
Corequisites: None
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. A portfolio of finished work will be required of all students.

ENG 231 American Literature I 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
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.

ENG 232 American Literature II 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
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.

ENG 234 Modern American Poets 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course covers the works of selected major modern American poets. Topics include each poet's theory and practice of poetry and the historical and literary traditions that influenced or were influenced by the poets. Upon completion, students should be able to read poetry with more comprehension and explicate selected poems in light of technique, theory, and poetic traditions.

ENG 241 British Literature I 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
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.

ENG 242 British Literature II 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
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.

ENG 253 The Bible as Literature 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course introduces the Hebrew Old Testament and the Christian New Testament as works of literary art. Emphasis is placed on the Bible's literary aspects including history, composition, structure, and cultural contexts. Upon completion, students should be able to identify and analyze selected books and passages using appropriate literary conventions.

ENG 261 World Literature I 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from their literary beginnings through the seventeenth century. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.

ENG 262 World Literature II 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from the eighteenth century to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works.

ENG 271 Contemporary Literature 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course includes a study of contemporary literature. Emphasis is placed on literary and cultural trends of selected texts. Upon completion, students should be able to interpret, analyze, and respond to the literature.

ENG 272 Southern Literature 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works.

ENG 273 African-American Literature 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
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.

ENG 274 Literature by Women 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course provides an analytical study of the works of several women authors. Emphasis is placed on the historical and cultural contexts, themes and aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works.

ENG 275 Science Fiction 3 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course covers the relationships between science and literature through analysis of short stories and novels. Emphasis is placed on scientific discoveries that shaped Western culture and our changing view of the universe as reflected in science fiction literature. Upon completion, students should be able to trace major themes and ideas and illustrate relationships between science, world view, and science fiction literature.

ENVIRONMENTAL SCIENCE (ENV Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ENV	**110**	**Environmental Science**	3	0	0	3

Prerequisites: None
Corequisites: None
This course covers the environmental problems facing society today. Topics include population, natural resources, air and water pollution, and waste disposal problems. Upon completion, students should be able to demonstrate insight into the role the individual plays in shaping the environment.

ENV 112 Env. Education I 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the student to elements of the NC Environmental Education Plan. Topics include: Basic NC Wild, Project Learning Tree, environmental education learning experience and aquatics. Upon completion, students should have an understanding of environmental education and complete learning objectives specific to obtaining the NCDENR Environmental Education Certification.

ENV 114 Environmental Educ. II 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the student to elements of the NC Environmental Education Plan. Emphasis is placed on the student participating in a variety of out-of-door experiences that support action to ensure stewardship of the earth's environment. Upon completion, students should have the necessary knowledge of the support resources and skills to lead an environmental education

class.

ENV 120 Earth Science 3 2 0 4
Prerequisites: ENV 110 or BIO 140 and BIO 140A
Corequisites: None
This course covers the fundamental principles of earth science that provide a foundation for continued study in environmental science. Emphasis is placed on the basic principles of geology, oceanography, meteorology, astronomy, and the development of inquiry about the natural world through observation. Upon completion, students should be able to demonstrate an understanding of the component areas of earth science.

ENV 193 Selected Topics in Environmental Science Technology - - - 3
Prerequisites: ENV 120
Corequisites: ENV 210, ENV 214
This course provides an opportunity to explore areas of current interest in Environmental Science Technology. Emphasis is placed on subject matter appropriate to environmental science technology. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ENV 193A Selected Topics in Rural Watershed Protection 2 3 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study. This course examines the environmental and public health impacts of animal wastes, pesticides and fertilizer contamination in rural watersheds.

ENV 210 Management of Waste 3 2 0 4
Prerequisites: CHM 131, ENV 110 or BIO 140 and BIO 140A
Corequisites: None
This course examines contemporary environmental issues concerning the disposal of wastes. Topics include problems associated with the disposal of municipal solid water, low-level radioactive waste, high-level radioactive waste, and hazardous and toxic waste. Upon completion, students should be able to demonstrate an understanding of the methodologies and technologies involved in the proper handling and disposal of wastes.

ENV 212 Instrumentation 3 3 0 4
Prerequisites: ENV 110 or BIO 140 and BIO 140A
Corequisites: CHM 132
This course introduces analytical techniques used in quantitative analysis of chemical samples. Emphasis is placed on both classical wet techniques of chemical analysis and modern instrumental techniques. Upon completion, students should be able to use the methodologies and technologies involved in chemical analysis.

ENV 214 Water Quality 3 2 0 4
Prerequisites: CHM 131, ENV 110 or BIO 140 and BIO 140A
Corequisites: None
This course examines the constituents of natural waters from a biological and geochemical perspective. Topics include common components of water, water sources, water law, health consequences, water treatment procedures, and the design of water treatment plants. Upon completion, students should be able to demonstrate an understanding of the biological, chemical, and geological factors affecting water quality.

ENV 218 Environmental Health 3 0 0 3
Prerequisites: ENV 110 or BIO 140 and BIO 140A
Corequisites: None
This course covers the influence of environmental conditions on human health. Emphasis is placed on environmental contaminants and the major exposure routes of the human body. Upon completion, students should be able to examine segments of the environment, including air, water, and food, and determine how the conditions of these influence human health.

ENV 220 Applied Ecology 3 2 0 4
Prerequisites: ENV 110 or BIO 140 and BIO 140A and BIO 111
Corequisites: None
This course covers the relationships between organisms and their environment and the interactions among organisms. Topics include environmental factors affecting aquatic and terrestrial systems, regulation and dynamics of populations, interactions among species, and the ecological viewpoint in modern land management. Upon completion, students should be able to demonstrate an understanding of the relationship between man and his environment and the ecological impact of human activities.

ENV 222 Air Quality 3 2 0 4
Prerequisites: CHM 131, ENV 110 or BIO 140 and BIO 140A
Corequisites: None
This course introduces the study of air quality and air pollution. Emphasis is placed on air pollution basics, current atmospheric conditions, effects of air pollution, air quality analysis and measurement, and regulatory control of air pollution. Upon completion, students should be able to demonstrate an understanding of the environmental hazards associated with air pollution from a human health and welfare perspective.

ENV 226 Environmental Law 3 0 0 3
Prerequisites: ENV 110 or BIO 140 and BIO 140A
Corequisites: ENV 218
This course covers federal laws and acts concerning environmental quality standards and the use of resources, legal procedures for enforcing laws, and problems concerning enforcement. Emphasis is placed on environmental law basics, water quality laws, air quality laws, waste disposal laws, and biological resource protection laws. Upon completion, students should be able to demonstrate an understanding of federal/state environmental laws and their importance to the protection of environmental quality.

ENV 228 Environmental Issues 1 0 0 1
Prerequisites: None
Corequisites: None
This course provides a forum for the discussion of current environmental issues. Emphasis is placed on environmental news, regulations, accidents, and areas of controversy. Upon completion, students should be able to demonstrate an understanding of the impact of local, state, national, and global events on environmental quality.

ENV 232 Site Assessment and Remediation 2 3 0 3
Prerequisites: ENV 110 *or* BIO 140 and BIO 140A
Corequisites: None
This course introduces the concepts and techniques utilized in the assessment and remediation of contaminated soils and groundwater. Emphasis is placed on hydrogeology, environmental sampling, and remediation practices. Upon completion, the student should be able to properly sample environmental media, demonstrate a knowledge of groundwater dynamics, and discuss various remediation approaches.

FIRE PROTECTION (FIP Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
FIP 120	**Intro to Fire Protection**	3	0	0	3

Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

FIP 124 Fire Prevention & Public Ed 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

FIP 128 Detection & Investigation 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

FIP 132 Building Construction 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

FIP 136 Inspections & Codes 3 0 0 3
Prerequisites: None
Corequisites: None
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.

FIP 144 Sprinklers & Auto Alarms 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces various types of automatic sprinklers, standpipes, and fire alarm systems. Topics include wet or dry systems, testing and maintenance, water supply requirements, fire detection and alarm systems, and other related topics. Upon completion, students should be able to demonstrate a working knowledge of various sprinkler and alarm systems and required inspection and

maintenance.

FIP 152 Fire Protection Law 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

FIP 156 Computers in Fire Svc 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the use of computers by fire protection organizations. Topics include operating systems, networking concepts, fire incident reporting systems, and other software applications in fire protection. Upon completion, students should be able to demonstrate knowledge of computers and their applications to fire protection.

FIP 164 OSHA Standards 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers public and private sector OSHA work site requirements. Emphasis is placed on accident prevention and reporting, personal safety, machine operation, and hazardous material handling. Upon completion, students should be able to analyze and interpret specific OSHA regulations and write workplace policies designed to achieve compliance.

FIP 220 Fire Fighting Strategies 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

FIP 221 Adv Fire Fighting Strat 3 0 0 3
Prerequisites: FIP 220
Corequisites: None
This course covers command-level operations for multi-company/agency operations involving fire and non-fire emergencies. Topics include advanced ICS, advanced incident analysis, command-level fire operations, and control of both man made and natural major disasters. Upon completion, students should be able to describe proper and accepted systems for the mitigation of emergencies at the level of overall scene command.

FIP 228 Local Govt Finance 3 0 0 3
Prerequisites: None
Corequisites: None
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.

FIP 229 Fire Dynamics and Combust 3 0 0 3
Prerequisites: None
Corequisites: None
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.

FIP 230 Chem of Hazardous Mat I 5 0 0 5
Prerequisites: None
Corequisites: None
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.

FIP 232 Hydraulics & Water Dist 2 2 0 3
Prerequisites: MAT 115, MAT 120, MAT 121, MAT 140, MAT 151, MAT 161, MAT 171, or MAT 175
Corequisites: None
This course covers the flow of fluids through fire hoses, nozzles, appliances, pumps, standpipes, water mains, and other devices. Emphasis is placed on supply and delivery systems, fire flow testing, hydraulic calculations, and other related topics. Upon completion, students should be able to perform hydraulic calculations, conduct water availability tests, and demonstrate knowledge of water distribution systems.

FIP 236 Emergency Management 3 0 0 3
Prerequisites: None
Corequisites: None
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.

FIP 240 Fire Service Supervision 3 0 0 3
Prerequisites: None
Corequisites: None
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 the effective fire service supervisor, meeting elements of NFPA 1021

FIP 244 Fire Protection Project 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to apply knowledge covered in previous courses to employment situations that the fire protection professional will encounter. Emphasis is placed on the development of comprehensive and professional practices. Upon completion, students should be able to demonstrate knowledge of the fire protection service through written and performance evaluations.

FIP 248 Fire Svc Personnel Adm 3 0 0 3
Prerequisites: None
Corequisites: None
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.

FIP 256 Munic Public Relations 3 0 0 3
Prerequisites: None
Corequisites: None
This course is a general survey of municipal public relations and their effect on the governmental process. Topics include principles of public relations, press releases, press conferences, public information officers, image surveys, and the effects of perceived service on fire protection delivery. Upon completion, students should be able to manage the public relations functions of a fire service organization, which meet elements of NFPA 1021 for Fire Officer I and II.

FIP 277 Fire and Social Behavior 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers fire-related aspects of human behavior, with an emphasis on research and a systems approach to human-behavior analysis. Topics include identification of populations and structures at high risk, evaluation of systems models, and use of computer models to predict human behavior during fires. Upon completion, students should be able to identify and anticipate human behavior in response to various residential, commercial, board-and-care facility, and wildland/rural fire events.

FIP 260 Fire Protect Planning 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the need for a comprehensive approach to fire protection planning. Topics include the planning process, using an advisory committee, establishing goals and objectives, and techniques used to approve and implement a plan. Upon completion, students should be able to demonstrate a working knowledge of the concepts and principles of planning as it relates to fire protection.

FIP 276 Managing Fire Services 3 0 0 3
Prerequisites: None
Corequisites: None
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.

FRENCH (FRE Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
FRE	**111**	**Elementary French I**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: FRE 181
This course introduces the fundamental elements of the French language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.

FRE 112 Elementary French II 3 0 0 3
Prerequisites: A grade of "C" or better in FRE 111
Corequisites: FRE 182
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.

FRE 161 Cultural Immersion 2 3 0 3
Prerequisites: FRE 111
Corequisites: None
This course explores Francophone culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate an understanding of cultural differences.

FRE 181 French Lab 1 0 2 0 1
Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: FRE 111
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.

FRE 182 French Lab 2 0 2 0 1
Prerequisites: A grade of "C" or better in FRE 181
Corequisites: FRE 112
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.

FRE 211 Intermediate French I 3 0 0 3
Prerequisites: A grade of "C" or better in FRE 112
Corequisites: FRE 281
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.

FRE 212 Intermediate French II 3 0 0 3
Prerequisites: FRE 211
Corequisites: FRE 282
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.

FRE 221 French Conversation 3 0 0 3
Prerequisites: FRE 212
Corequisites: None
This course provides an opportunity for intensive communication in spoken French. 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.

FRE 281 French Lab 3 0 2 0 1
Prerequisites: A grade of "C" or better in FRE 182
Corequisites: FRE 211
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.

FRE 282 French Lab 4 0 2 0 1
Prerequisites: FRE 281
Corequisites: FRE 212
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.

FOOD SERVICE (correction facilities only) (FST Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
FST	**100**	**Intro to Foodservice**	3	0	0	3

Prerequisites: None
Corequisites: FST 103
This course is designed to develop an understanding of the foodservice industry, its terminology, mathematics, and measurements. Emphasis is placed on employability skills, vocabulary, factions, ratio and proportion, and percents. Upon completion, students should be able to identify career paths, convert recipes, and differentiate standard measurements. *This course is restricted to the Foodservice Technology programs and is approvable for offering only at designated Department of Correction facilities.*

FST	**101**	**Intro to Baking**	1	4	0	3

Prerequisites: None
Corequisites: FST 103
This course introduces fundamental concepts, skills, and techniques in quantity baking. Topics include yeast and quick breads, cookies, cakes, and other baked goods. Upon completion, students should be able to prepare and evaluate baked products. *This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.*

FST	**102**	**Basic Foodservice Skills**	4	8	0	8

Prerequisites: None
Corequisites: FST 103
This course introduces the concepts, skills, and techniques for volume food production in an institutional setting. Emphasis is placed on development of skills in knife, tool, and equipment handling and applying principles of food preparation to produce varieties of food products. Upon completion, students should be able to demonstrate entry-level skills in a quantity food service operation. *This course is restricted to Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.*

FST	**103**	**Safety and Sanitation**	2	2	0	3

Prerequisites: None
Corequisites: None
This course provides practical experience with the basic principles of safety and sanitation in the foodservice industry. Emphasis is placed on personal hygiene habits, safety regulations, and food handling practices (H.A.C.C.P.) that protect the health of the consumer. Upon completion, students should be able to demonstrate appropriate safety and sanitation practices required in the foodservice industry. *This course is restricted to Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.*

GEOLOGY (GEL Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
GEL	**113**	**Historical Geology**	3	2	0	4

Prerequisites: A grade of “C” or better in GEL 111 or GEL 120
Corequisites: None
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.

GEL	**120**	**Physical Geology**	3	2	0	4

Prerequisites: ENG 090, MAT 070, RED 090, or placement
Corequisites: None
This course provides a study of the structure and composition of the earth's crust. Emphasis is placed on weathering, erosional and depositional processes, mountain building forces, rocks and minerals, and structural changes. Upon completion, students should be able to explain the structure, composition, and formation of the earth's crust.

GEL	**230**	**Environmental Geology**	3	2	0	4

Prerequisites: A grade of “C” or better in GEL 111 or GEL 120 or PHS 130
Corequisites: None
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.

GEOGRAPHY (GEO Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
GEO	**111**	**World Regional Geography**	3	0	0	3

Prerequisites: ENG 090 and RED 090
Corequisites: None
This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community*

(VLC).

GEO 112 Cultural Geography 3 0 0 3
Prerequisites: RED 090, ENG 090
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

GEOGRAPHIC INFORMATION SYSTEMS (GIS Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
GIS 111	**Introduction to GIS**	2	2	0	3

Prerequisites: None
Corequisites: None
This course introduces the hardware and software components of a Geographic Information System and reviews GIS applications. Topics include data structures and basic functions, methods of data capture and sources of data, and the nature and characteristics of spatial data and objects. Upon completion, students should be able to identify GIS hardware components, typical operations, products/applications, and differences between database models and between raster and vector systems.

GIS 112 Introduction to GPS 2 2 0 3
Prerequisites: None
Corequisites: None
This course provides an overview of Global Positioning Systems (GPS). Topics include the theory, implementation, and operations of GPS, as well as alternate data source remote sensing. Upon completion, students should be able to demonstrate an understanding of the fundamentals of GPS.

GIS 120 Introduction to Geodesy 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts behind map projections, datums, and coordinate systems.
Topics include the theory of how the earth's shape is defined and how geographic features are positioned using spherical coordinate systems. Upon completion, students should be able to demonstrate an understanding of the fundamentals of geodesy as it relates to the measurement and representation of the earth.

GIS 121 Georeferencing & Mapping 2 2 0 3
Prerequisites: GIS 111
Corequisites: None
This course introduces coordinate systems, fundamentals of surveying, and cartography. Topics include the theory, acquisition, and use of locational data using both continuous and discrete georeferencing methods. Upon completion, students should be able to identify appropriate coordinate systems for a situation and translate data into correct map form.

GIS 125 CAD for GIS 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the concepts of Computer Aided Drafting (CAD) as well as software that is used for building geographic data for a GIS. Emphasis is placed on the learning of basic commands used in building spatial data. Upon completion, student will be able to operate within a CAD environment.

GIS 161 Intro to Comp /BASIC & C++ 1 4 0 3
Prerequisites: None
Corequisites: None
This course introduces the electronic computer and includes a general description of computer design and operation, associated vocabulary, and most widely used applications. Emphasis is placed on hands-on experience with software. Upon completion, students should be able to utilize and depict calculations, decision-making and branching and looping functions processing, and top-down programming methodology.

GIS 230 GIS Data Creation 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts of primary GIS data creation. Topics include the collection of field data, digital conversion of existing hardcopy maps, and the construction of spatial data from known geodetic locations. Upon completion, students should be able to demonstrate an ability to collect, create, and process spatial data within a variety of environments.

GIS 251 Computer Graphics Mapping 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces the various methods and techniques of computer assisted and generated images. Emphasis is placed upon know of and use of draw and paint software, basic word processing, and map production. Upon completion, students should be able to produce and utilize computer generated images.

GRAPHIC ARTS (GRA Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
GRA	**255**	**Image Manipulation I**	1	3	0	2

Prerequisites: GRA 151 or GRD 151
Corequisites: None
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.

GRAPHIC DESIGN (GRD Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
GRD	**110**	**Typography I**	2	2	0	3

Prerequisites: Red 090 and MAT 060
Corequisites: None
This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.

GRD	**111**	**Typography II**	2	2	0	3

Prerequisites: GRD 110
Corequisites: None
This course is a continuation of GRD 110. Emphasis is placed on solving challenging typographic problems. Upon completion, students should be able to understand and demonstrate advanced typographic applications.

GRD	**117**	**Design Career Exploration**	2	0	0	2

Prerequisites: None
Corequisites: None
This course covers opportunities in the graphic design field and employment requirements. Topics include evaluation of career choices, operations, structure of advertising and graphic design businesses, and related business issues. Upon completion, students should be able to demonstrate an understanding of the graphic design field and consider an appropriate personal direction of career specialization.

GRD	**121**	**Drawing Fundamentals I**	1	3	2	0

Prerequisites: None
Corequisites: None
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. Students should possess a basic drawing ability to successfully complete drawings at the college level.

GRD	**131**	**Illustration I**	1	3	0	2

Prerequisites: ART 131, DES 125, or GRD 121
Corequisites: None
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.

GRD	**141**	**Graphic Design I**	2	4	0	4

Prerequisites: RED 090 or ENG 111
Corequisites: None
This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.

GRD	**142**	**Graphic Design II**	2	4	0	4

Prerequisites: ART 121, DES 135, or GRD 141
Corequisites: None
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.

GRD	**151**	**Computer Design Basics**	1	4	0	3

Prerequisites: RED 090 and MAT 060
Corequisites: None
This course covers designing and drawing with various types of software applications for advertising and graphic design. Emphasis is placed on creative and imaginative use of space, shapes, value, texture, color, and typography to provide effective solutions to advertising and graphic design problems. Upon completion, students should be able to use the computer as a creative tool.

GRD 152 Computer Design Tech I 1 4 0 3
Prerequisites: GRD 151
Corequisites: None
This course covers complex design problems utilizing various design and drawing software applications. Topics include the expressive use of typography, image, and organization to communicate a message. Upon completion, students should be able to use appropriate computer software to professionally present their work.

GRD 153 Computer Design Tech II 1 4 0 3
Prerequisites: GRD 151 and GRD 152
Corequisites: None
This course covers advanced theories and practices in the field of computer design. Emphasis is placed on advanced use of color palettes, layers, and paths. Upon completion, students should be able to creatively produce designs and articulate their rationale.

GRD 157 Computer Design Apps II 0 3 0 1
Prerequisites: None
Corequisites: GRD 152
This course is designed to provide additional hands-on training with computer software applications. Emphasis is placed on utilizing appropriate computer applications to create and develop intermediate graphic designs. Upon completion, students should be able to produce intermediate graphic design projects using the computer.

GRD 160 Photo Fundamentals I 1 4 0 3
Prerequisites: None
Corequisites: None
This course introduces basic camera operations, roll film processing, and photographic print production. Topics include contrast, depth-of-field, subject composition, enlarger operation, and density control. Upon completion, students should be able to produce photographic prints with acceptable density values and quality.

GRD 161 Photo Fundamentals II 1 4 0 3
Prerequisites: GRD 160
Corequisites: None
This course is a continuation of GRD 160. Topics include conversions, toning, color, specialized equipment, lighting, processing, and other methods and materials. Upon completion, students should be able to demonstrate proficiency in producing photographic prints.

GRD 167 Photographic Imaging I 1 4 0 3
Prerequisites: None
Corequisites: None
This course introduces basic camera operations and photographic production. Topics include subject composition, depth of field, shutter control, light control, color, photo-finishing, and digital imaging, correction and output. Upon completion, students should be able to produce traditional and/or digital photographic prints with acceptable technical and compositional quality.

GRD 168 Photographic Imaging II 1 4 0 3
Prerequisites: GRD 167
Corequisites: None
This course introduces advanced camera operations and photographic production. Topics include lighting, specialized equipment, digital image correction and output, and other methods and materials. Upon completion, students should be able to demonstrate proficiency in producing high quality photographic prints.

GRD 170 Exhibit Design 1 4 0 3
Prerequisites: GRD 141
Corequisites: None
This course introduces basic studio problems in three-dimensional visual design. Emphasis is placed on the structural elements and organizational principles as applied to mass and space. Upon completion, students should be able to apply three-dimensional design concepts in both exhibit designs and commercial displays.

GRD 175 3-D Animation Design 1 4 0 3
Prerequisites: GRD 151 or GRA 151
Corequisites: None
This course explores three-dimensional animation design and production. Emphasis is placed on developing essential skills and techniques using three-dimensional animation software from conceptualization to completion including design, illustration, color, spatial depth, and movement. Upon completion, students should be able to produce animation sequences for computer-related presentations.

GRD 193 Selected Topics in Advertising and Graphic Design - - - 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Advertising and Graphic Design. Emphasis is placed on the development of critical listening skills and the presentation of selected topic issues. Upon completion, students should be able to critically analyze issues and establish informed opinions. This is an advanced design course focusing on the principles of digital production and design projects.

GRD 198 Seminar in Advertising and Graphic Design 2 2 0 3
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Advertising and Graphic Design. Emphasis is placed on subject matter appropriate to advertising and graphic designing. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

GRD 230 Technical Illustration 1 3 0 2
Prerequisites: ART 131, DES 125, or GRD 121
Corequisites: None
This course introduces technical and industrial illustration techniques. Topics include orthographic, isometric, linear perspective, and exploded views. Upon completion, students should be able to demonstrate competence in various technical rendering techniques.

GRD 232 Fashion Illustration 1 3 0 2
Prerequisites: GRD 131
Corequisites: None
This course is a study of the current fashion figure. Emphasis is placed on form and movement combined with colors, patterns, fabrics, textures, and styles to create exciting illustrations. Upon completion, students should be able to illustrate fashion figures and accessories using various media.

GRD 233 Product Illustration 1 3 0 2
Prerequisites: GRD 131 or GRD 230 and GRD 152 or GRA 152
Corequisites: None
This course covers the rendering and illustration of products for commercial purposes. Topics include viewpoint, styles, media, and subjects such as household, industrial, hardware, and sporting goods. Upon completion, students should be able to illustrate products using traditional line, continuous-tone, and digital media.

GRD 241 Graphic Design III 2 4 0 4
Prerequisites: DES 136 or GRD 142
Corequisites: None
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.

GRD 242 Graphic Design IV 2 4 0 4
Prerequisites: GRD 241
Corequisites: None
This course is a continuation of GRD 241. Emphasis is placed on using advanced media techniques, concepts, strategies, and professionalism in all aspects of design. Upon completion, students should be able to conceptualize, create, and produce designs for reproduction.

GRD 263 Illustrative Imaging 1 4 0 3
Prerequisites: GRD 151 or GRA 151
Corequisites: None
This course covers the creative manipulation of images utilizing digital techniques of masking, layering, airbrushing, and painting. Topics include the aesthetic analysis of visual imagery as well as the legalities of manipulating images. Upon completion, students should be able to utilize software applications to creatively manipulate and illustratively build digital images which accomplish design objectives.

GRD 265 Digital Print Production 1 4 0 3
Prerequisites: GRD 151 or GRA 151 GRD 152
Corequisites: None
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. Topics include sustainable and eco-friendly printing solutions including Forest Stewardship Council certification.

GRD 271 Multimedia Design I 1 3 0 2
Prerequisites: GRD 151 or GRA 151
Corequisites: None
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.

GRD 280 Portfolio Design 2 4 0 4
Prerequisites: GRD 142 and GRD 152 or GRA 152, and WEB 140
Corequisites: None
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 résumé 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.

GRD 281 Design of Advertising 2 0 0 2
Prerequisites: None
Corequisites: None
This course explores the origins, roles, scope, forms, and development of advertising. Emphasis is placed on advertising development from idea through production and the interrelationship of marketing to types of advertising, media, and organizational structure. Upon completion, students should be able to demonstrate an understanding of the complexities and relationships involved in advertising design.

GRD 282 Advertising Copywriting 1 2 0 2
Prerequisites: ENG 111 or ENG 110; GRD 110 or GRD 151
Corequisites: None
This course covers copywriting for print, electronic, and broadcast advertising and promotion. Topics include advertising strategies, proposals, headlines, slogans, and text copy for various types of advertising. Upon completion, students should be able to write and articulate advertising proposals and understand the ethical and regulatory environment for advertising.

GRD 285 Client/Media Relations 1 2 0 2
Prerequisites: GRD 142 and GRA 121 or GRA 152 or GRD 152 and ENG 111
Corequisites: None
This course introduces media pricing, scheduling, and business ethics. Emphasis is placed on communication with clients and determination of clients' advertising needs. Upon completion, students should be able to use professional communication skills to effectively orchestrate client/media relationships.

GRD 292 Selected Topics in Advertising and Graphic Design 1 2 0 2
Prerequisites: GRD-152
Corequisites: None
This course provides an opportunity to explore areas of current interest in Advertising and Graphic Design. Emphasis is placed on subject matter appropriate to advertising and graphic designing. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

GRD 293 Selected Topics in Advertising and Graphic Design 2 2 0 3
Prerequisites: Varies, based on topics
Corequisites: None
This course provides an opportunity to explore areas of current interest in Advertising and Graphic Design. Emphasis is placed on subject matter appropriate to advertising and graphic designing. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

GRD 298 Selected Topics in Advertising and Graphic Design 2 2 0 3
Prerequisites: Varies, based on topics
Corequisites: None
This course provides an opportunity to explore areas of current interest in Advertising and Graphic Design. Emphasis is placed on subject matter appropriate to advertising and graphic designing. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

GERONTOLOGY (GRO Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
GRO 120	**Gerontology**	3	0	0	3

Prerequisites: PSY 150
Corequisites: None
This course covers the psychological, social, and physical aspects of aging. Emphasis is placed on the factors that promote mental and physical well-being. Upon completion, students should be able to recognize the aging process and its psychological, social, and physical aspects.

GRO 150 Substance Use and Aging 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces methods to prevent and reduce substance addiction within the older adult population. Emphasis is placed on understanding problems associated with alcohol, drug and medication misuse in addition to signs, symptoms and treatment options. Upon completion, the student should be able to describe how substance use and abuse impacts the quality of life for the older adult population.

GRO 240 Gerontology Care Managing 2 0 0 2
Prerequisites: GRO 120
Corequisites: None
This course covers community resources; discusses care management, including assessment, care-planning, evaluation, issues of family, high-risk and self care. Topic includes funding, eligibility for community and health resources; care management protocols, care plan development, identification of major resources and barriers to self care. Upon completion, student will be able to develop a care plan for older adults at various levels of needs, including community and health resources.

HEALTHCARE BUSINESS INFORMATIC (HBI Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HBI	**110**	**Issues and Trends in HBI**	3	0	0	3

Prerequisites: None
Corequisites: None
This course is a survey of current and emerging technology applications and data standards in the healthcare industry. Topics include the history, implementation, use, management, and impact of information technology in healthcare settings. Upon completion, students should have an understanding of the current trends and issues in healthcare informatics.

HEALTH (HEA Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HEA	**110**	**Personal Health/Wellness**	3	0	0	3

Prerequisites: None
Corequisites: None
This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness. This course will include practical, real-life applications to the material presented in the text that encourage students to apply the material to their own lives.

HEA	**112**	**First Aid and CPR**	1	2	0	2

Prerequisites: None
Corequisites: None
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.

HEAVY EQUIPMENT MAINTENANCE (HET Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HET	**110**	**Diesel Engines**	3	9	0	6

Prerequisites: None
Corequisites: None
This course introduces theory, design, terminology, and operating adjustments for diesel engines. Emphasis is placed on safety, theory of operation, inspection, measuring, and rebuilding diesel engines according to factory specifications. Upon completion, students should be able to measure, diagnose problems, and repair diesel engines.

HET	**110A**	**Diesel Engines Part 1**	2	6	0	4

Prerequisites: None
Corequisites: None
This course introduces theory, design, terminology, and operating adjustments for diesel engines. Emphasis is placed on safety, theory of operation, inspection, measuring, and rebuilding diesel engines according to factory specifications. Upon completion, students should be able to measure, diagnose problems, and repair diesel engines. This is part one of a two part course.

HET	**110B**	**Diesel Engines Part 2**	1	3	0	2

Prerequisites: HET 110A
Corequisites: None
This course introduces theory, design, terminology, and operating adjustments for diesel engines. Emphasis is placed on safety, theory of operation, inspection, measuring, and rebuilding diesel engines according to factory specifications. Upon completion, students should be able to measure, diagnose problems, and repair diesel engines. This is part two of a two-part course.

HET	**112**	**Diesel Electrical Systems**	3	6	0	5

Prerequisites: None
Corequisites: None
This course introduces electrical theory and applications as they relate to diesel powered equipment. Topics include lighting, accessories, safety, starting, charging, instrumentation, and gauges. Upon completion, students should be able to follow schematics to identify, repair, and test electrical circuits and components.

HET	**114**	**Power Trains**	3	6	0	5

Prerequisites: None
Corequisites: None
This course introduces power transmission devices. Topics include function and operation of gears, chains, clutches, planetary gears, drive lines, differentials, and transmissions. Upon completion, students should be able to identify, research specifications, repair, and adjust power train components.

HET	**115**	**Electronic Engines**	2	3	0	3

Prerequisites: None
Corequisites: None
This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturers' specifications. Upon completion, students should be able to diagnose, test, and calibrate electronically controlled diesel engines.

HET 116 Air Conditioning/Diesel Equipment 1 2 0 2
Prerequisites: None
Corequisites: None
This course provides a study of the design, theory, and operation of heating and air conditioning systems in newer models of medium and heavy duty vehicles. Topics include component function, refrigerant recovery, and environmental regulations. Upon completion, students should be able to use proper techniques and equipment to diagnose and repair heating/air-conditioning systems according to industry standards.

HET 120 Intro to Mobile Equipment 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces the functions and systems of modern medium and heavy duty vehicles. Topics include use of technical manuals, tools and equipment, record keeping, material safety data sheets, and work habit safety. Upon completion, students should be able to use technical manuals, tools, equipment, and material safety data sheets.

HET 128 Med/Heavy Duty Tune-up 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces tune-up and troubleshooting according to manufacturers' specifications. Topics include troubleshooting engine systems, tune-up procedures, and use and care of special test tools and equipment. Upon completion, students should be able to troubleshoot, diagnose, and repair engines and components using appropriate diagnostic equipment.

HET 134 Mechanical Fuel Injection 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the principles of mechanical fuel injection.
Emphasis is placed on test equipment, component functions, and theory. Upon completion, students should be able to diagnose, service, and repair fuel systems and governors.

HET 192 Selected Topics in Heavy Equipment and Transport Technology - - - 2
Prerequisites: Varies, based on topic.
Corequisites: None
This course provides an opportunity to explore areas of current interest in heavy equipment and transport technology. Emphasis is placed on subject matter appropriate to heavy equipment. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

HET 211 Ag Harvesting Equipment 2 4 0 4
Prerequisites: None
Corequisites: None
This course covers the theory, design, principles of operation and adjustment, and troubleshooting and repair of harvesting equipment including combines and hay and forage equipment. Emphasis is placed on operating and troubleshooting harvest equipment hydraulics and monitoring equipment. Upon completion, students should be able to diagnose, adjust, or repair new or used harvesting equipment in accordance with manufacturers' specifications. *This course is a unique concentration requirement of the Agricultural Systems concentration in the Heavy Equipment and Transport Technology program.*

HET 217 Tractor Performance 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers procedures for attaining optimum performance of agricultural tractors. Emphasis is placed on problem solving using dynamometers, test procedures, and safety. Upon completion, students should be able to use test equipment to diagnose engines and drive components and adjust tractors to achieve optimum performance. *This course is a unique concentration requirement of the Agricultural Systems concentration in the Heavy Equipment and Transport Technology program.*

HET 231 Med/Heavy Duty Brake Sys 1 3 0 2
Prerequisites: None
Corequisites: None
This course covers the theory and repair of braking systems used in medium and heavy duty vehicles. Topics include air, hydraulic, and ABS system diagnosis and repair. Upon completion, students should be able to troubleshoot, adjust, and repair braking systems on medium and heavy duty vehicles.

HET 232 Med/Hvy Duty Brake Sys Lab 0 3 0 1
Prerequisites: None
Corequisites: HET 231
This course provides a laboratory setting to enhance the skills for troubleshooting, adjusting, and repairing brake systems on medium and heavy duty vehicles. Emphasis is placed on practical experiences that enhance the topics presented in HET 231. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in HET 231.

HET 233 Suspension and Steering 2 4 0 4
Prerequisites: None
Corequisites: None
This course introduces the theory and principles of medium and heavy duty steering and suspension systems. Topics include wheel and tire problems, frame members, fifth wheel, bearings, and coupling systems. Upon completion, students should be able to troubleshoot, adjust, and repair suspension and steering components on medium and heavy duty vehicles.

HISTORY (HIS Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HIS	**111**	**World Civilizations I**	3	0	0	3

Prerequisites: ENG 090, and RED 090, or placement
Corequisites: None
This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

HIS	**112**	**World Civilizations II**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

HIS	**121**	**Western Civilization I**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
This course introduces western civilization from pre-history to the early modern era. Topics include ancient Greece, Rome, and Christian institutions of the Middle Ages and the emergence of national monarchies in western Europe. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early western civilization. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).*

HIS	**122**	**Western Civilization II**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
This course introduces western civilization from the early modern era to the present. Topics include the religious wars, the Industrial Revolution, World Wars I and II, and the Cold War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern western civilization. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).*

HIS	**131**	**American History I**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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.

HIS	**132**	**American History II**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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.

HIS	**151**	**Hispanic Civilization**	3	0	0	3

Prerequisites: ENG 090 and RED 090 or ENG 111
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS	**162**	**Women and History**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS	**167**	**The Vietnam War**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
This course covers the American political and military involvement in Vietnam from 1944 to 1975. Topics include the French colonial policy, Vietnamese nationalism, the war with France, American involvement, and resolution of the conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments that influenced the

Vietnam War. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 216 Twentieth-Century Europe 3 0 0 3
Prerequisites: HIS 122
Corequisites: None
This course provides an in-depth survey of twentieth-century Europe. Topics include World Wars I and II, and political, social, and cultural movements of the twentieth century. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in twentieth-century Europe. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 221 African-American History 3 0 0 3
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 222 African-American Hist I 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course covers African American history through the Civil War period. Topics include African origins, the nature of slavery, African-American participation in the American Revolution, abolitionism, and the emergence of a distinct African-American culture. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early African-American history. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

HIS 223 African-American Hist II 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course covers African American history from the Civil War to the present. Topics include Reconstruction, the Jim Crow era, urbanization, the Harlem Renaissance, the Civil Rights movement, and the philosophies of major African-American leaders. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in African-American history since the Civil War. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 226 The Civil War 3 0 0 3
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
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 socio-economic 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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 231 Recent American History 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course is a study of American society from the post-Depression era to the present. Topics include World War II, the Cold War, social unrest, the Vietnam War, the Great Society, and current political trends. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in recent America. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 236 North Carolina History 3 0 0 3
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 242 Russian History from 1917 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course covers the development of Russia from 1917 to the present. Topics include the Russian Revolution, Stalinism, Marxist foreign policy, the world wars, the Cold War, and the present. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Russia since 1917. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 251 English History I 3 0 0 3
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
This course traces the political, social, and economic development of England to the Elizabethan period. Topics include the early development of England, the Norman conquest, medieval society, and Elizabethan England. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early English history. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 252 English History II 3 0 0 3
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
This course traces the political, social, and economic development of England from the Elizabethan period to the present. Topics include imperialism, industrial development, civil wars, and world wars. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in English history from Elizabethan England to the present. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HIS 271 The French Revolution Era 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course traces the causes and effects of the French Revolution. Topics include the Enlightenment; Jacobins; Reign of Terror; Napoleon's republic, empire, and wars; and the French Revolution's impact upon world history. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments during the French revolutionary era. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

HORTICULTURE (HOR Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HOR	**268**	**Advanced Propagation**	3	3	0	4

Prerequisites: None
Corequisites: None
This course covers applied production techniques for asexual and sexual plant propagation. Emphasis is placed on the major accepted methods of asexual propagation and sexual propagation of woody ornamental plants, with evaluation of all initiated propagation. Upon completion, students should be able to successfully propagate a variety of plant materials utilizing methods covered in the course.

HIGH PERFORMANCE COMPUTING (HPC Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HPC	**150**	**HPC Networking Technology**	2	2	0	3

Prerequisites: HPC 110 or NET 110
Corequisites: None
This course introduces students to the networking topologies in a HPC environment. Topics include multiprocessor networks, network interface, testing methods and prototype development for high-speed network technologies, interoperability among high-speed network products and virtual networks. Upon completion, students should be able to discuss network issues for a HPC environment.

HPC 152 HPC Development Tools 2 2 0 3
Prerequisites: HPC 110
Corequisites: None
This course introduces students to performance analysis tools to measure, predict, locate, and analyze bottleneck situations in parallel and cluster application. Topics include system software, parallel software life-cycle issues and a review of parallel developmental options in a HPC environment. Upon completion, students should be able discuss various HPC development tools and their appropriate usage in the HPC environment.

HPC 162 HPC Security 2 2 0 3
Prerequisites: HPC 110
Corequisites: None
This course provides an overview of distributed computer security issues as related to HPC services. Topics include cryptographic technologies, protocols used to construct secure and private systems, internet service security mechanisms, firewalls, auditing, and related topics. Upon completion, students should be able to implement security procedures for a HPC system.

HPC 170 Introduction to HPC Data Mining 2 2 0 3
Prerequisites: HPC 110
Corequisites: None
This course provides an introduction to data intensive computing on HPC machines. Topics include distributed mass storage, efficient retrieval techniques, data management tools, appropriate data structures and case studies. Upon completion, students should be able to define and discuss performance evaluation of a database in a HPC environment.

HPC 172 HPC Applications 2 2 0 3
Prerequisites: HPC 110
Corequisites: None
This course introduces students to currently available HPC applications highlighting software approaches and hardware platforms. Topics include a review of successfully deployed HPC systems in industry and research environments and decision-making techniques when selecting HPC. Upon completion, students should be able to discuss, in oral as well as written form, current HPC applications highlighting strengths and weaknesses.

HPC 193 Selected Topics in HPC 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in High Performance Computing. Emphasis is placed on the subject matter appropriate to High Performance Computing. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

HPC 198 Seminar in HPC 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in High Performance Computing. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

HPC 230 Advanced HPC Communication 2 2 0 3
Prerequisites: HPC 130
Corequisites: None
This course introduces students to advanced communication and networking topics in a HPC environment. Topics include switch queuing strategy, performance modeling, review of current high-speed communication networks and available tools and libraries for improving high-speed communications. Upon completion, students should be able to design and defend a reliable high-speed communication model for a HPC environment.

HPC 240 Advanced HPC Architecture 2 2 0 3
Prerequisites: HPC 140
Corequisites: None
This course introduces students to advanced hardware architecture for a (HPC) system. Topics include topology of parallel computer architecture, arithmetic pipeline design, array machines, distributed architecture, multi-processor computers, SIMD, MIMD machines and current recent parallel machines. Upon completion, students should be able to design and discuss a user specified HPC architecture system.

HPC 245 Grid Technologies 2 2 0 3
Prerequisites: HPC 110
Corequisites: None
This course introduces students to Grid technologies and distributed computing architecture. Topics include distributed security architecture, data formats, distributed file systems, access control of shared resources and multi-institutional collaborative environments. Upon completion, students should be able to discuss, in oral and written form, issues related to creating a scalable, distributed and secure HPC Grid environment.

HPC 262 Advanced HPC Security 2 2 0 3
Prerequisites: HPC 162
Corequisites: None
This course introduces students to advanced security topics and various security applications. Topics include authentication for distributed systems, authorization models, developing secure distributed operating systems and databases, distributed intrusion detection, advanced cryptographic algorithms. Upon completion, students should be able to design a secure distributed system in a HPC environment.

HPC 264 HPC Security Management 3 0 0 3
Prerequisites: HPC 162
Corequisites: None
This course is designed to provide students with a review of access and security management practices in a HPC environment. Topics include HPC disaster recovery, business continuity, redundancy and reliability policies, HPC hardware, software and network security models and physical security. Upon completion, students should be able to prepare a HPC disaster recovery continuity plan, and review security practices in every area of the HPC environment.

HPC 270 Advanced HPC Data Mining 2 2 0 3
Prerequisites: HPC 170
Corequisites: None
This course introduces students to advance data mining and database design techniques in a HPC environment. Topics include data retrieval algorithms, text mining techniques, document clustering, query clusters, mathematical models, data fusion and software design for information retrieval. Upon completion, students should be able to design and implement a database using data mining techniques in a HPC environment.

HPC 272 Emerging HPC Technologies 3 0 0 3
Prerequisites: HPC 110
Corequisites: None
This course introduces students to emerging technologies in the field of High Performance Computing (HPC). Emphasis is placed on the new technologies in the HPC field and a review of HPC and cluster systems already implemented. Upon completion, students should be able to discuss, in written and oral form emerging technologies in the HPC field.

HPC 280 Advanced Cluster Computing 2 2 0 3
Prerequisites: HPC 180
Corequisites: None
This course introduces students to advanced design techniques and related issues in cluster computing. Topics include a review of successfully deployed cluster systems used in commerce, industry and research environments. Upon completion, students should be able to summarize findings and draw conclusions about current cluster technology, discuss emerging technology trends and clusters of the future.

HPC 285 Systems Analysis and Design 3 0 0 3
Prerequisites: HPC 110
Corequisites: None
This course provides an opportunity for students to complete a significant HPC systems project with minimal instructor support. Emphasis is placed on project definition, documentation, testing, and presentation. Upon completion, students should be able to complete a HPC project.

HPC 298 Seminar in HPC 3 0 0 3
Prerequisites: MAT 070, RED 090
Corequisites: None
This course provides an opportunity to explore areas of current interest in High Performance Computing. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

HOSPITALITY MANAGEMENT (HRM Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HRM	**110**	**Intro to Hosp & Tourism**	2	0	0	2

Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111, MAT 070
Corequisites: None
This course covers the growth and progress of the hospitality industry. Topics include financing, hotels, restaurants, and clubs. Upon completion, students should be able to demonstrate an understanding of the background, context, and career opportunities that exist in the hospitality industry.

HRM 120 Front Office Procedures 3 0 0 3
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111, MAT 070
Corequisites: None
This course provides a systematic approach to hotel front office procedures. Topics include reservations, registration, guest satisfaction, occupancy and rate management, security, interdepartmental communications, and related guest services. Upon completion, students should be able to demonstrate a basic understanding of current front office operating systems, including efficient and courteous guest services.

HRM 140 Legal Issues - Hospitality 3 0 0 3
Prerequisites: MAT 070, RED 090, ENG 090
Corequisites: None
This course covers the rights and responsibilities that the law grants to or imposes upon the hospitality industry. Topics include federal and state regulations, historical and current practices, safety and security, risk management, loss prevention, relevant torts, and contracts. Upon completion, students should be able to demonstrate an understanding of the legal system and the concepts necessary to prevent or minimize organizational liability.

HRM 193 Selected Topics in Hotel and Restaurant Management - - - 3
Prerequisites: CUL 140
Corequisites: None
This course provides an opportunity to explore areas of current interest in Hotel and Restaurant Management. Emphasis is placed on subject matter appropriate to hotel and restaurant management. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

HRM 210 Meetings and Event Planning 3 0 0 3
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111, MAT 070
Corequisites: None
This course introduces organization, arrangement, and operation of conventions, trade shows, professional meetings, and food functions. Emphasis is placed on the methods of marketing, selling, and servicing conventions and trade shows and the division of administrative responsibilities in their operation. Upon completion, students should be able to describe and apply the principles of management to multi-function, multi-day conferences and events.

HRM 215 Restaurant Management 3 0 0 3
Prerequisites: Take One: CUL 135 and CUL 135a or HRM 124
Corequisites: None
This course provides an overview of the responsibilities and activities encountered in managing a food and beverage operation. Topics include planning, organization, accounting, marketing, trends, and human resources from an integrated managerial viewpoint. Upon completion, students should be able to demonstrate an understanding of the operation of a restaurant.

HRM 220 Cost Control-Food & Bev 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces controls and accounting procedures as applied to costs in the hospitality industry. Topics include reports, cost control, planning and forecasting, control systems, financial statements, operational efficiencies, labor controls and scheduling. Upon completion, students should be able to demonstrate an understanding of food, beverage, and labor cost control systems for operational troubleshooting and problem solving.

HRM 225 Beverage Management 2 0 0 2
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111, MAT 070
Corequisites: None
This course introduces the management of beverage operations in a hospitality operation. Topics include history, service, procurement, storage, and control of wines, fermented and distilled beverages, sparkling waters, coffees, and teas. Upon completion, students should be able to demonstrate knowledge of the beverages consumed in a hospitality operation.

HRM 240 Marketing for Hospitality 3 0 0 3
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111, MAT 070
Corequisites: None
This course covers planning, organizing, directing, and analyzing the results of marketing programs in the hospitality industry. Emphasis is placed on market segmentation and analysis, product and image development, sales planning, advertising, public relations, and collateral materials. Upon completion, students should be able to prepare a marketing plan applicable to the hospitality industry.

HRM 245 Human Resources Mgmt-Hosp 3 0 0 3
Prerequisites: Take one set: MAT 070, RED 090, ENG 090 or ENG 111, MAT 070
Corequisites: None
This course introduces a systematic approach to human resource management in the hospitality industry. Topics include training/development, staffing, selection, hiring, recruitment, evaluation, benefit administration, employee relations, labor regulations/laws, discipline, motivation, productivity, shift management, contract employees and organizational culture. Upon completion, students should be able to apply human resource management skills for the hospitality industry.

HRM 260 Procurement for Hosp 3 0 0 3
Prerequisites: MAT 070, RED 090, and ENG 090
Corequisites: None
This course provides information for management decisions regarding needs analysis and fulfillment for hospitality operations. Emphasis is placed on supply chain sourcing, environmental impacts, procurement technologies, and packaging of products such as food, beverages, supplies, furniture, and equipment. Upon completion, students should be able to demonstrate competence in planning and executing the procurement function.

HRM 275 Leadership-Hospitality 3 0 0 3
Prerequisites: MAT 070, RED 090, and ENG 090
Corequisites: None
This course introduces leadership traits, styles, and the roles and responsibilities of successful hospitality leaders while developing the student?s personal leadership skills. Topics include formal and informal hospitality leadership; defining effective and ineffective leadership behavior; and leadership organizational change and planning within the hospitality industry. Upon completion, students will be able to apply appropriate leadership actions in real-world situations ranging from local to global hospitality environments.

HRM 280 Mgmt Problems- Hospitality 3 0 0 3
Prerequisites: HRM 110
Corequisites: None
This course is designed to introduce students to timely issues within the hospitality industry and is intended to move students into a managerial mindset. Emphasis is placed on problem-solving skills using currently available resources. Upon completion, students should be able to demonstrate knowledge of how hospitality management principles may be applied to real challenges facing industry managers.

HEALTH SCIENCES (HSC Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
HSC 120	**CPR**	0	2	0	1

Prerequisites: None
Corequisites: None
This course covers the basic knowledge and skills for the performance of infant, child, and adult CPR and the management of foreign body airway obstruction. Emphasis is placed on recognition, assessment, and proper management of emergency care. Upon completion, students should be able to perform infant, child, and adult CPR and manage foreign body airway obstructions.

HUMAN SERVICES (HSE Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HSE	**110**	**Introduction to Human Services**	2	2	0	3

Prerequisites: None
Corequisites: None
This course introduces the human services field, including the history, agencies, roles, and careers. Topics include personal/professional characteristics, diverse populations, community resources, disciplines in the field, systems, ethical standards, and major theoretical and treatment approaches. Upon completion, students should be able to identify the knowledge, skills, and roles of the human services worker.

HSE	**112**	**Group Process I**	1	2	0	2

Prerequisites: None
Corequisites: None
This course introduces interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to show competence in identifying and explaining how people are influenced by their interactions in group settings.

HSE	**115**	**Health Care Concepts**	3	2	0	4

Prerequisites: None
Corequisites: None
This course covers basic aspects of health and medical care. Emphasis is placed on the mental, social, and physical needs of various groups; first aid in emergency situations; and medical/legal ethics. Upon completion, students should be able to identify various health/medical situations, obtain appropriate certifications, and understand the medical/legal ramifications of health care.

HSE	**123**	**Interviewing Techniques**	2	2	0	3

Prerequisites: None
Corequisites: None
This course covers the purpose, structure, focus, and techniques employed in effective interviewing. Emphasis is placed on observing, attending, listening, responding, recording, and summarizing of personal histories with instructor supervision. Upon completion, students should be able to perform the basic interviewing skills needed to function in the helping relationship.

HSE	**145**	**Child Abuse and Neglect**	3	0	0	3

Prerequisites: None
Corequisites: None
This course explores the abused and neglected child, including the nature and dimension of the problem. Emphasis is placed on various types of abuse and neglect, their causes, proper treatment, and reporting laws and procedures. Upon completion, students should be able to identify family intervention and counseling techniques to help parents effectively cope in parent-child conflicts.

HSE	**210**	**Human Services Issues**	2	0	0	2

Prerequisites: None
Corequisites: None
This course covers current issues and trends in the field of human services. Emphasis is placed on contemporary topics with relevance to special issues in a multi-faceted field. Upon completion, students should be able to integrate the knowledge, skills, and experiences gained in classroom and clinical experiences with emerging trends in the field.

HSE	**220**	**Case Management**	2	2	0	3

Prerequisites: HSE 110
Corequisites: None
This course covers the variety of tasks associated with professional case management. Topics include treatment planning, needs assessment, referral procedures, and follow-up and integration of services. Upon completion, students should be able to effectively manage the care of the whole person from initial contact through termination of services.

HSE	**225**	**Crisis Intervention**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces the basic theories and principles of crisis intervention. Emphasis is placed on identifying and demonstrating appropriate and differential techniques for intervening in various crisis situations. Upon completion, students should be able to assess crisis situations and respond appropriately.

HSE	**242**	**Family Systems**	3	0	0	3

Prerequisites: PSY 150 or SOC 210
Corequisites: None
This course introduces the concepts of family structure as a system and includes the impact of contemporary society on the family. Topics include systems theory, family structure, blended families, divorce, adoption, and the elderly. Upon completion, students should be able to demonstrate an understanding of families as a system and the impact of change on family structure.

HSE	**250**	**Financial Services**	2	0	0	2

Prerequisites: None
Corequisites: None
This course introduces those agencies that provide income maintenance casework services. Emphasis is placed on qualifying applicants for a variety of economic assistant programs offered by human services agencies. Upon completion, students should be able to make a factual and objective assessment of a client's economic situation to qualify them for economic assistance.

HSE 255 Health Prob & Prevent 2 2 0 3
Prerequisites: None
Corequisites: None
This course surveys a range of health problems and issues, including the development of prevention strategies. Topics include teen pregnancy, HIV/AIDS, tuberculosis, communicable diseases, professional burnout, substance abuse, and sexually transmitted diseases. Upon completion, students should be able to identify health issues and demonstrate prevention strategies.

HUMANITIES (HUM Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
HUM	**110**	**Technology and Society**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).*

HUM 115 Critical Thinking 3 0 0 3
Prerequisites: ENG 095 or RED 090 and ENG 090or placement
Corequisites: None
This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching cross-cultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts. Students will also explore the parameters of selected ethical issues.

HUM 121 The Nature of America 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides an interdisciplinary survey of the American cultural, social, and political experience. Emphasis is placed on the multicultural character of American society, distinctive qualities of various regions, and the American political system. Upon completion, students should be able to analyze significant cultural, social, and political aspects of American life. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

HUM 122 Southern Culture 3 0 0 3
Prerequisites: RED 090 and ENG 090
Corequisites: None
This course explores the major qualities that make the South a distinct region. Topics include music, politics, literature, art, religion, race relations, and the role of social class in historical and contemporary contexts. Upon completion, students should be able to identify the characteristics that distinguish Southern culture. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).*

HUM 130 Myth in Human Culture 3 0 0 3
Prerequisites: ENG 090 and RED 090, or placement
Corequisites: None
This course provides an in-depth study of myths and legends. Topics include the varied sources of myths and their influence on the individual and society within diverse cultural contexts. Upon completion, students should be able to demonstrate a general familiarity with myths and a broad-based understanding of the influence of myths and legends on modern culture. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts*.

HUM 160 Introduction to Film 2 2 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces the fundamental elements of film artistry and 7165 production. Topics include film styles, history, and production techniques, as well as the social values reflected in film art. Upon completion, students should be able to critically analyze the elements covered in relation to selected films.

HUM 161 Advanced Film Studies 2 2 0 3
Prerequisites: HUM 160
Corequisites: None
This course provides an advanced study of film art and production, building on skills learned in HUM 160. Topics include film production techniques, film genres, examination of master directors' styles, and the relation of film to culture. Upon completion, students should be able to recognize and critically analyze advanced elements of film production.

HUM 170 The Holocaust 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course provides a survey of the destruction of European Jewry by the Nazis during World War II. Topics include the anti-Semitic ideology, bureaucratic structures, and varying conditions of European occupation and domination under the Third Reich. Upon completion, students should be able to demonstrate an understanding of the historical, social, religious, political, and economic factors which cumulatively resulted in the Holocaust. *This course has been approved to satisfy the Comprehensive*

Articulation Agreement for transferability as a premajor and/or elective course requirement.

HUM 211 Humanities I 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

HUM 212 Humanities II 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

HUM 220 Human Values and Meaning 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

HUM 230 Leadership Development 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
This course explores the theories and techniques of leadership and group process. Emphasis is placed on leadership styles, theories of group dynamics, and the moral and ethical responsibilities of leadership. Upon completion, students should be able to identify and analyze a personal philosophy and style of leadership and integrate these concepts in various practical situations. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. (TAC 11/16/05)*

HYDRAULICS AND PNEUMATICS (HYD Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
HYD 111	**Mobile Hydraulic Systems**	1	4	0	3

Prerequisites: None
Corequisites: None
This course covers hydraulic components on mobile equipment including construction equipment, transportation, and farm equipment. Topics include servicing of pumps, testing and adjusting components, test points, and proper use and care of test equipment. Upon completion, students should be able to use proper test equipment to locate and repair problems on equipment.

HYD 112 Hydraulics/Med/Heavy Duty 1 2 - 2
Prerequisites: None
Corequisites: None
This course introduces hydraulic theory and applications as applied to mobile equipment. Topics include component studies such as pumps, motors, valves, cylinders, filters, reservoirs, lines, and fittings. Upon completion, students should be able to identify, diagnose, test, and repair hydraulic systems using schematics and technical manuals.

HYD 134 Hydraulic/Hydrostatic Construction 2 4 0 4
Prerequisites: None
Corequisites: None
This course covers the hydraulic/hydrostatic components of construction equipment hydraulics and power trains. Topics include testing, adjusting, repair, and replacement of components that are applied to construction equipment hydraulics and transmissions along with other related topics. Upon completion, students should be able to use proper diagnostic procedures and identify, repair, and replace hydraulic and hydrostatic systems on construction equipment.

IMAGING (IMG Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
IMG 130	**Imaging Ethics & Law**	3	0	0	3

Prerequisites: None
Corequisites: None
This course covers the legalities of relationships between health care workers and patients. Emphasis is placed on professional malpractice, patient rights, legal and professional standards, and ethical considerations. Upon completion, students should be able to demonstrate the legal and ethical responsibilities of a diagnostic imaging professional.

INTERNATIONAL BUSINESS (INT Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
INT	**110**	**International Business**	3	0	0	3

Prerequisites: None
Corequisites: None
This course provides an overview of the environment, concepts, and basic differences involved in international business. Topics include forms of foreign involvement, international trade theory, governmental influences on trade and strategies, international organizations, multinational corporations, personnel management, and international marketing. Upon completion, students should be able to describe the foundation of international business.

INDUSTRIAL SCIENCE (ISC Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ISC	**112**	**Industrial Safety**	2	0	0	2

Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

ISC	**121**	**Environmental Health and Safety**	3	0	0	3

Prerequisites: None
Corequisites: None
This course covers workplace environmental, health, and safety issues. Emphasis is placed on managing the implementation and enforcement of environmental health and safety regulations and on preventing accidents, injuries, and illnesses. Upon completion, students should be able to demonstrate an understanding of basic concepts of environmental, health, and safety issues.

ISC	**128**	**Industrial Leadership**	2	0	0	2

Prerequisites: None
Corequisites: None
This course introduces principles and techniques for managers in modern industry. Topics include leadership traits, management principles and processes, managing conflict, group dynamics, team building, counseling, motivation, and communication. Upon completion, students should be able to understand and apply leadership and management principles in work situations.

ISC	**132**	**Manufacturing Quality Control**	2	3	0	3

Prerequisites: None
Corequisites: None
This course introduces quality concepts and techniques used in industry. Topics include elementary statistics and probability, process control, process capability, and quality improvement tools. Upon completion, students should be able to demonstrate an understanding of the concepts and principles of quality and apply them to the work environment. Each student will be taught statistical analysis techniques, using computer software in a laboratory environment.

ISC	**133**	**Manufacturing Management Practices**	2	0	-	2

Prerequisites: None
Corequisites: None
This course covers successful industrial organizations and management practices for improving quality and productivity. Topics include self-managed work teams, problem-solving skills, and production management techniques. Upon completion, students should be able to demonstrate an understanding of day-to-day plant operations, team management processes, and the principles of group dynamics.

ISC	**136**	**Productivity Analysis I**	2	3	0	3

Prerequisites: None
Corequisites: None
This course covers modern methods of improving productivity. Topics include methods analysis, standardized practices, process analysis, and human factors. Upon completion, students should be able to apply productivity improvement techniques.

ISC	**175**	**QA Fundamentals**	1	0	0	1

Prerequisites: None
Corequisites: None
This course is designed to increase fundamental knowledge in the philosophies, principles, and practice of quality in the work environment. Topics include the history and basics of quality, philosophies of quality, daily application of principles, and roles of quality professionals with emphasis on cGMP environment. Upon completion, students should be able to discuss quality fundamentals, components of quality systems, and identify standards and programs of quality.

ISC	**221**	**Statistical Quality Control**	3	0	0	3

Prerequisites: None
Corequisites: None
This course covers the principles and techniques of statistical process control for the improvement of productivity. Emphasis is placed on basic statistics for quality control, organization and procedures for efficient quality control including inspections, process control, and tests of significance. Upon completion, students should be able to apply statistical principles and techniques to enhance production.

ISC 226 Facilities Design 3 2 0 4
Prerequisites: ISC 136 and ISC 243
Corequisites: None
This course introduces the methods and principles used to design efficient facilities. Emphasis is placed on efficient processes required to optimize facilities design. Upon completion, students should be able to design efficient facilities.

ISC 230 Simulation Production Processes 1 3 0 2
Prerequisites: None
Corequisites: None
This course introduces fundamental principles and procedures for simulation modeling of production processes. Emphasis is placed on problem-solving and engineering applications of simulation modeling for quality enhancement and productivity improvement. Upon completion, students should be able to analyze and model a production process to obtain optimum productive operations.

ISC 237 Quality Management 2 3 0 3
Prerequisites: None
Corequisites: None
This course covers the process by which successful manufacturing organizations achieve customer satisfaction in all processes in the organization. Topics include quality models and approaches, such as MBNQA, ISO 9000, benchmarking, and Deming's 14 Points, and the incorporation of SPC improvement techniques. Upon completion, students should be able to integrate SPC techniques with successful management practices for a comprehensive understanding of continuous quality improvement.

ISC 243 Production and Operations Management I 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces concepts used to analyze and solve productivity and operational problems. Topics include operations strategy, forecasting, resource allocation, and materials management. Upon completion, students should be able to recognize, analyze, and solve a variety of productivity and operational problems.

ISC 244 Production and Operations Management II 2 3 0 3
Prerequisites: ISC 243
Corequisites: None
This course covers advanced production and operations management concepts, including the use of computer programs to analyze/solve manufacturing problems. Topics include systems analysis, resource allocation, cost control, and productivity improvement using advanced tools such as linear programming, ABC costing, manufacturing modeling, and manufacturing simulation. Upon completion, students should be able to recognize, analyze, and solve a variety of complex production and operations problems.

ISC 255 Engineering Economy 2 2 0 3
Prerequisites: None
Corequisites: None
This course covers the process of economic evaluation of manufacturing industrial alternatives such as equipment selection, replacement studies, and cost reduction proposals. Topics include discounted cash flows, time value of money, income tax considerations, internal rates of return, and comparison of alternatives using computer programs. Upon completion, students should be able to analyze complex manufacturing alternatives based on engineering economy principles.

ISC 277 Quality Technology 4 0 0 4
Prerequisites: None
Corequisites: None
This course presents quality assurance topics relating to an effective quality system. Emphasis is placed on quality management concepts, including sampling and reliability. Upon completion, students should have the basic knowledge required to take the ASQC Certified Quality Technician Exam.

ISC 278 cGMP Quality Systems 2 0 0 2
Prerequisites: None
Corequisites: None
This course focuses on the development, implementation, and on-going maintenance of a quality system in a cGMP environment. Topics include the cGMP standard, components of cGMP quality systems, quality function roles and training, development of documentation such as SOPs, and system review procedures. Upon completion, the student should be able to identify the components of a quality system and develop a quality system manual utilizing the cGMP standard.

ISC 280 Validation Fundamentals 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the fundamental concepts and components of a validation program in a cGMP environment. Emphasis is placed on FDA requirements concerning validation, types of validation, documentation, procedures, and the QA role. Upon completion, students should be able to discuss the purpose of validation, identify the steps in the validation process, and effectively utilize sample documentation.

INTERNET TECHNOLOGIES (ITN Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
ITN	**110**	**See WEB 111**				
ITN	**120**	**See WEB 120**				
ITN	**130**	**See WEB 230**				
ITN	**140**	**See WEB 140**				
ITN	**160**	**See WEB 210**				
ITN	**170**	**See WEB 250**				
ITN	**180**	**See WEB 180**				
ITN	**193**	**Selected Topics in Internet Technologies**	-	-	-	3

Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Internet Technologies. Emphasis is placed on subject matter appropriate to internet technologies. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ITN	**196**	**Seminar in: C++ Test Prep**	0	0	3	1

Prerequisites: None
Corequisites: None
This course provides an opportunity to explore topics of current interest in Computer Programming. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

ITN	**198**	**Seminar in Internet Technologies**	-	-	-	3

Prerequisites: CIS 115
Corequisites: None
This course provides an opportunity to explore areas of current interest in Internet Technologies. Emphasis in placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

ITN	**210**	**See WEB 211**				
ITN	**220**	**See WEB 220**				
ITN	**240**	**See WEB 240**				
ITN	**260**	**See WEB 260**				
ITN	**270**	**Advanced Internet Databases**	2	2	0	3

Prerequisites: ITN 170
Corequisites: None
This is the second of two courses on Internet databases. Topics include database distribution and replication, data warehousing, integration of desktop and Internet database structures. Upon completion, students should be able to design and implement an Internet database.

ITN	**285**	**See WEB 285**				
ITN	**289**	**See WEB 289**				
ITN	**293**	**Selected Topics: PL/SQL Programming**	2	2	0	3

Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Internet Technologies. Emphasis is placed on subject matter appropriate to internet technologies. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ITN	**298**	**Seminar in Internet Technologies**	2	2	0	3

Prerequisites: Varies, based on topics
Corequisites: None
This course provides an opportunity to explore areas of current interest in Internet Technologies. Emphasis is placed on subject matter appropriate to internet technologies. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

JOURNALISM (JOU Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
JOU	**110**	**Introduction to Journalism**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: None
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.

JOU	**111**	**Publication Workshop I**	1	3	0	2

Prerequisites: JOU 110
Corequisites: None
This course introduces the basic techniques of producing a publication. Emphasis is placed on writing, editing, layout, design, and printing. Upon completion, students should be able to demonstrate competence in the various phases of publication production.

JOU	**242**	**Introduction to Multimedia**	2	2	0	3

Prerequisites: CIS 110, ENG 090, and RED 090
Corequisites: None
This course is an introduction to the basic formatting skills necessary to create messages for the multimedia environment such as web-based and other digital formats. Emphasis is on the use of computers to present and combine text, graphics, audio, and video. Upon completion, students should be able to create state-of-the-art multimedia presentations. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

LANDSCAPE ARCHITECTURE (LAR Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
LAR	**111**	**Introduction to Landscape Architectural Technology**	1	6	0	3

Prerequisites: None
Corequisites: None
This course introduces basic architectural drafting techniques, lettering, and use of architectural and engineering scales. Topics include creating landscape architectural plans, sections, and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum landscape architectural standards.

LAR	**112**	**Landscape Materials and Methods**	3	2	0	4

Prerequisites: None
Corequisites: None
This course introduces landscape architecture construction materials and their methodologies. Topics include landscape construction terminology, materials and their properties, manufacturing processes, landscape construction techniques, and other related topics. Upon completion, students should be able to detail landscape construction materials and properties.

LAR	**113**	**Residential Landscape Design**	1	6	0	3

Prerequisites: LAR 111
Corequisites: None
The course covers the creation of residential landscape design working drawings. Topics include residential plans, elevation, sections, plant selection/lists, and other related topics. Upon completion, students should be able to prepare a set of residential landscape working drawings which are within accepted architectural standards.

LAR	**193**	**Selected Topics in Landscape Architecture**	-	-	-	3

Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Landscape Architecture Technology. Emphasis is placed on subject matter appropriate to landscape architecture. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

LAR	**211**	**Commercial Site Design**	1	6	0	3

Prerequisites: LAR 113
Corequisites: None
This course covers commercial landscape design techniques. Topics include creation of site analysis drawings, commercial landscape architectural plans, and other related topics. Upon completion, students should be able to perform a site analysis, design a commercial landscape, and generate scaled drawings within landscape architectural standards.

LAR	**223**	**Land Design Project**	2	6	0	4

Prerequisites: ARC 114 and LAR 211
Corequisites: CIV 125
This course provides the opportunity to design and prepare landscape contract documents. Topics include schematic design, design development, grading, roadway and parking lot design, and other related topics. Upon completion, students should be able to prepare drawings within landscape architectural standards.

LAR	**230**	**Prin of Exterior Planting**	3	3	0	4

Prerequisites: None
Corequisites: None
This course introduces the identification and installation of landscape plants. Topics include ornamental plant selection, anatomy,

physiology, ecology, installation, fertilization, pruning, pest and disease control, and other related topics. Upon completion, students should be able to select plants for different landscape situations.

LAR 231 Principles of Horticulture II 2 3 0 3
Prerequisites: None
Corequisites: None
This course is a continuation of LAR 230 and covers the identification, selection, and installation of landscape plants. Topics include deciduous/evergreen and interior plant selection, sun and shade plants, fertilization, pruning, pest and disease identification, and other related topics. Upon completion, students should be able to select plants for different landscape situations.

LAR 241 Advanced Site Planning 2 2 0 3
Prerequisites: ARC 240
Corequisites: None
This course covers advanced site planning, grading plants, and earthwork calculations. Topics include advanced 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.

LAR 242 Planning and Environment 2 2 0 3
Prerequisites: None
Corequisites: None
This course covers the historical development of urban and rural environmental problems and issues. Emphasis is placed on governmental response to environmental issues, built and natural environments, historical conflicts, and attempts to produce planning compatibility. Upon completion, students should be able to demonstrate an understanding of the importance of considering natural resources when making political and planning decisions.

LAR 250 Survey of LAR 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the historical trends in landscape architectural forms. Emphasis is placed on landscape architectural history and current trends. Upon completion, students should be able to demonstrate an understanding of significant historical and current landscape architectural styles.

LOGISTICS MANAGEMENT (LOG Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
LOG	**110**	**Introduction to Logistics**	3	0	0	3

Prerequisites: None
Corequisites: None
This course provides an overview of logistics. Topics include traffic management, warehousing, inventory control, material handling, global logistics, and the movement and storage of goods from raw materials sources to end consumers. Upon completion, students should be able to identify the different segments of logistics and use the terminology of the industry. *This course is also available through the Virtual Learning Community (VLC).*

LOG 125 Transportation Logistics 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the role and importance of the transportation industry. This is an overview of transportation emphasizing its environmental and sociological aspects, economic impact, services, regulatory guidelines, policies, and its future. Upon completion, students should be able to identify modes of transportation, interpret governing regulations, and describe the principles and terminology used in the transportation industry.

LOG 211 Distribution Management 2 2 0 3
Prerequisites: LOG 110
Corequisites: None
This course covers the functions, techniques, and tools utilized in warehousing and distribution centers and their role in business and logistics. Emphasis is placed on warehouse and distribution center management, operations, productivity, software systems, picking, automation, cross docking, safety, security, material handling, benchmarking, and cost. Upon completion, students should be able to describe the role of warehouses and distribution centers, apply industry principles and terminology, and understand distribution productivity measures

LOG 215 Supply Chain Management 3 0 0 3
Prerequisites: LOG 110
Corequisites: None
This course covers all activities involved in the flow of products and information between the suppliers, customers, producers, and service providers. Topics include acquiring, purchasing, manufacturing, assembling, and distributing goods and services throughout the supply chain organizations. Upon completion, students should be able to identify the supply chain units, describe the materials management processes, and prepare for the APICS CPIM examination.

LOG 225 Logistics Systems 3 2 0 4
Prerequisites: LOG 215
Corequisites: None
This course covers the design, implementation, and application of logistics software systems utilized by businesses to improve

accountability, and capabilities of their logistics processes. Emphasis is placed on an in-depth understanding of logistical software applications, optimization models, automated data collection, electronic data interchange, and other logistics software tools. Upon completion, students should be able to identify the various logistics software applications and explain how they are utilized to improve business and logistics processes.

LOG 235 Import/Export Management 3 0 0 3
Prerequisites: LOG 125
Corequisites: None
This course introduces the elements of import and export operations, from transportation to documentation, finance, and security and the effects on the global supply chain. Emphasis is placed on existing import/export regulations, customs documentation, intermodal transportation, foreign freight forwarders, global technology, and homeland security initiatives. Upon completion, students should be able to perform import/export operations, channels of distribution, implemented technologies, and associate with operating a secure supply chain.

LOG 240 Purchasing Logistics 3 0 0 3
Prerequisites: LOG 110
Corequisites: None
This course introduces the various aspects of purchasing, and their impact on materials management, supply chain, transportation, and global logistics processes. Emphasis is placed on the different methods of electronic sourcing, negotiating and pricing principles, and on the internal and external considerations associated with international logistics. Upon completion, students should be able to describe and apply the principles and terminology used in procurement including electronic data interchange services, purchasing and logistics systems.

LOG 245 Logistics Security 3 0 0 3
Prerequisites: LOG 110
Corequisites: None
This course covers the role and importance of securing the domestic and global transportation and supply chain networks. Emphasis is placed on Customs and Border Protection, Department of Homeland Security, the Transportation Security Agency and how they affect businesses, logistics and transportation processes. Upon completion, students should be able to apply the principles and terminologies used in securing the logistics and transportation networks and identify potential threats.

LOG 250 Advanced Global Logistics 3 2 0 4
Prerequisites: LOG 125
Corequisites: None
This course covers the advanced application of global operations and logistics strategies, planning, technology, risk, and management necessary to cope with the global business environment. Emphasis is placed on an in-depth understanding of global sourcing, shipping, tracking, and e-logistics systems necessary to operate inbound/outbound logistics in a global market. Upon completion, students should be able to identify the different global markets and logistics technology available to process international inbound/outbound logistics transactions.

MACHINING (MAC Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
MAC	**111**	**Machining Technology I**	2	12	0	6

Prerequisites: None
Corequisites: None
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling.

MAC 111A Machining Technology I, Part 1 1 6 0 3
Prerequisites: None
Corequisites: None
This course is the first half of MAC 111 (see the description for MAC 111 above).

MAC 111B Machining Technology I, Part 2 1 6 0 3
Prerequisites: MAC 111A
Corequisites: None
This course is the second half of MAC 111 (see the description for MAC 111 above).

MAC 121 Introduction to CNC 2 0 0 2
Prerequisites: None
Corequisites: None
This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

MAC 151 Machining Calculations 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

MAC 229 CNC Programming 2 0 0 2
Prerequisites: MAC 121, MAC 122, MAC 124, or MAC 226
Corequisites: None
This course provides concentrated study in advanced programming techniques for working with modern CNC machine tools. Topics include custom macros and subroutines, canned cycles, and automatic machining cycles currently employed by the machine tool industry. Upon completion, students should be able to program advanced CNC functions while conserving machine memory.

MATHEMATICS (MAT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
MAT 001	**Mathematics Skills Lab**	-	-	-	-

Prerequisites: None
Corequisites: None
Designed to support all curriculum mathematics courses and other curriculum courses requiring the use of mathematics skills.

MAT 050 Basic Math Skills 3 2 0 4
Prerequisites: None
Corequisites: None
This course is designed to strengthen basic math skills. Topics include properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals. Upon completion, students should be able to perform basic computations and solve relevant mathematical problems.

MAT 051 Fast Track Basic Math 1 0 0 1
Prerequisites: None
Corequisites: None
This course is designed to offer a fast-paced review of basic arithmetic skills for students who have previously mastered these skills. Topics include all arithmetic operations on whole numbers, fractions, decimals and percents. Upon completion, students should be able to demonstrate mastery of basic computational skills, as well as their application to relevant mathematical problems. Students will be required to register for a companion MAT 060 course in the same semester.

MAT 060 Essential Mathematics 3 2 0 4
Prerequisites: MAT 050 or placement
Corequisites: None
This course is a comprehensive study of mathematical skills which should provide a strong mathematical foundation to pursue further study. Topics include principles and applications of decimals, fractions, percents, ratio and proportion, order of operations, geometry, measurement, and elements of algebra and statistics. Upon completion, students should be able to perform basic computations and solve relevant, multi-step mathematical problems using technology where appropriate.

MAT 061 Fast Track Essential Math 1 0 0 1
Prerequisites: MAT 050
Corequisites: None
This course is designed to offer a fast-paced, intensive review of skills taught in MAT 060. Emphasis is placed on working with signed numbers, problems involving proportions and per cents, as well as simplifying expressions and solving equations in algebra. Upon completion, students should be able to demonstrate mastery of pre-algebra computations and to solve relevant, multi-step problems. Students will be required to register for a companion MAT 070 course in the same semester.

MAT 070 Introductory Algebra 3 2 0 4
Prerequisites: MAT 060 or placement
Corequisites: RED 080 or ENG 085
This course establishes a foundation in algebraic concepts and problem solving. Topics include signed numbers, exponents, order of operations, simplifying expressions, solving linear equations and inequalities, graphing, formulas, polynomials, factoring, and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology.

MAT 071 Fast Track Introductory Algebra 1 0 0 1
Prerequisites: MAT 060
Corequisites: RED 080 or ENG 085
This course is designed to offer a fast-paced, intensive review of skills taught in MAT 070. Emphasis is placed on working with exponents, order of operations, simplifying algebraic expressions, solving linear equations and inequalities, graphing, formulas, polynomials, and factoring. Upon completion, students should be able to demonstrate mastery of introductory algebra concepts and apply these principles in solving problems. Students will be required to register for a companion MAT 080 course in the same semester.

MAT 080 Intermediate Algebra 3 2 0 4
Prerequisites: MAT 070 or placement
Corequisites: RED 080 or ENG 085
This course continues the study of algebraic concepts with emphasis on applications. Topics include factoring; rational expressions; rational exponents; rational, radical, and quadratic equations; systems of equations; inequalities; graphing; functions; variations; complex numbers; and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology.

MAT 090 Accelerated Algebra 3 2 0 4
Prerequisites: MAT 060 or MAT 080 or placement
Corequisites: RED 080 or ENG 085
This course covers algebraic concepts with emphasis on applications. Topics include those covered in MAT 070 and MAT 080. Upon completion, students should be able to apply algebraic concepts in problem solving using appropriate technology.

MAT 095 Algebraic Concepts 3 0 0 3
Prerequisites: MAT 080
Corequisites: None
This course covers algebraic concepts with an emphasis on applications. Topics include linear, quadratic, absolute value, rational and radical equations, sets, real and complex numbers, exponents, graphing, formulas, polynomials, systems of equations, inequalities, and functions. Upon completion, students should be able to apply the above topics in problem solving using appropriate technology.

MAT 099 Using Technology in Math 1 0 0 1
Prerequisites: None
Corequisites: None
This course provides an introduction to the technology used in the study of mathematics. Topics include the use of technology to perform calculations, graph and analyze functions, create algebraic models, perform statistical analysis, and make tables of values. Upon completion, students should be able to effectively use graphing calculators and spreadsheets as mathematical tools to explore functions, analyze data, and solve problems.

MAT 101 Applied Mathematics I 2 2 0 3
Prerequisites: MAT 060
Corequisites: None
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.

MAT 110 Mathematical Measurement 2 2 0 3
Prerequisites: MAT 070
Corequisites: None
This course provides an activity-based approach to utilizing, interpreting, and communicating data in a variety of measurement systems. Topics include accuracy, precision, conversion, and estimation within metric, apothecary, and avoirdupois systems; ratio and proportion; measures of central tendency and dispersion; and charting of data. Upon completion, students should be able to apply proper techniques to gathering, recording, manipulating, analyzing, and communicating data.

MAT 115 Mathematical Models 2 2 0 3
Prerequisites: MAT 070
Corequisites: None
This course develops the ability to utilize mathematical skills and technology to solve problems at a level found in non-mathematics-intensive programs. Topics include applications to percent, ratio and proportion, formulas, statistics, functional notation, linear functions and their groups, 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.

MAT 121 Algebra and Trigonometry I 2 2 0 3
Prerequisites: MAT 070
Corequisites: None
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.

MAT 122 Algebra/Trigonometry II 2 2 0 3
Prerequisites: MAT 121
Corequisites: None
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.

MAT 140 Survey of Mathematics 3 0 0 3
Prerequisites: MAT 070
Corequisites: MAT 140A
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.

MAT 140A Survey of Mathematics Lab 0 2 0 1
Prerequisites: MAT 070
Corequisites: MAT 140
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.

MAT 141 Mathematical Concepts I 3 0 0 3
Prerequisites: MAT 080 or MAT 090
Corequisites: None
This course is the first of a two-course sequence that develops a deeper understanding and appreciation of the basic concepts of mathematics. Emphasis is placed on sets, logic, number bases, elementary number theory, introductory algebra, measurement including metrics, and problem solving. Upon completion, students should be able to communicate orally and in writing these basic mathematical concepts. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

MAT 141A Mathematical Concepts I Lab 0 2 0 1
Prerequisites: MAT 080 or MAT 090
Corequisites: MAT 141
This course is a laboratory for MAT 141. 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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MAT 142 Mathematical Concepts II 3 0 0 3
Prerequisites: MAT 141
Corequisites: None
This course is the second of a two-course sequence that develops a deeper understanding and appreciation of the basic concepts of mathematics. Emphasis is placed on probability, statistics, functions, introductory geometry, and mathematics of finance. Upon completion, students should be able to communicate orally and in writing these basic mathematical concepts and utilize technology as a mathematical tool. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics*

MAT 142A Mathematical Concepts II Lab 0 2 0 1
Prerequisites: MAT 141
Corequisites: MAT 142
This course is a laboratory for MAT 142. 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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics.*

MAT 145 Analytical Mathematics 3 0 0 3
Prerequisites: MAT 080 or MAT 090
Corequisites: None
This course is designed to develop problem-solving and reasoning skills by the study of selected areas of mathematics. Topics include elementary and Boolean algebra, sets, logic, number theory, numeration systems, probability, statistics, and linear programming. Upon completion, students should be able to apply logic and other mathematical concepts.

MAT 145A Analytical Mathematics Lab 0 2 0 1
Prerequisites: MAT 080 or MAT 090
Corequisites: MAT 145
This course is a laboratory for MAT 145. 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.

MAT 151 Statistics I 3 0 0 3
Prerequisites: A grade of "C" or better in MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 140, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 151A
This course provides a project-based approach to the study of basic probability, descriptive and inferential statistics, and decision making. Emphasis is placed on measures of central tendency and dispersion, correlation, regression, discrete and continuous probability distributions, quality control, population parameter estimation, and hypothesis testing. Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics*

MAT 151A Statistics I Lab 0 2 0 1
Prerequisites: A grade of "C" or better in MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 151
This course is a laboratory for MAT 151. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MAT 155 Statistical Analysis 3 0 0 3
Prerequisites: MAT 080 or MAT 090
Corequisites: None
This course is an introduction to descriptive and inferential statistics. Topics include sampling, distributions, plotting data, central tendency, dispersion, Central Limits Theorem, confidence intervals, hypothesis testing, correlations, regressions, and multinomial experiments. Upon completion, students should be able to describe data and test inferences about populations using sample data.

MAT 155A Statistical Analysis Lab 0 2 0 1
Prerequisites: MAT 080 or MAT 090
Corequisites: MAT 155
This course is a laboratory for MAT 155. 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.

MAT 161 College Algebra 3 0 0 3
Prerequisites: MAT 080 or MAT 090
Corequisites: None
This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed on 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.

MAT 161A College Algebra Lab 0 2 0 1
Prerequisites: MAT 080 or MAT 090
Corequisites: MAT 161
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.

MAT 165 Finite Mathematics 3 0 0 3
Prerequisites: MAT 161
Corequisites: None
This course provides topics used to formulate models and to solve and interpret solutions using an algorithmic approach. Topics include linear algebra, linear programming, simplex method, sets and counting, probability, mathematics of finance, and logic. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts of finite mathematics and the ability to solve related problems.

MAT 165A Finite Mathematics Lab 0 2 0 1
Prerequisites: MAT 161
Corequisites: MAT 165
This course is a laboratory for MAT 165. 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.

MAT 167 Discrete Mathematics 3 0 0 3
Prerequisites: MAT 121, MAT 161, MAT 171 or MAT 280
Corequisites: MAT 167A
This course is a study of discrete mathematics with emphasis on applications. Topics include number systems, combinations/ permutations, mathematical logic/proofs, sets/counting, Boolean algebra, mathematical induction, trees/graphs, and algorithms. Upon completion, students should be able to demonstrate competence in the topics covered.

MAT 167A Discrete Mathematics Lab 0 2 0 1
Prerequisites: MAT 121, MAT 161, MAT 171 or MAT 280
Corequisites: MAT 167
This course is a laboratory for MAT 167. 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.

MAT 171 Pre-calculus Algebra 3 0 0 3
Prerequisites: MAT 080, MAT 090, MAT 095, or MAT 161
Corequisites: MAT 171A
This is the first of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on equations and inequalities, functions (linear, polynomial, rational), systems of equations and inequalities, and parametric equations. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and predictions.

MAT 171A Precalculus Algebra Lab 0 2 0 1
Prerequisites: MAT 080, MAT 090, MAT 095 or MAT 161
Corequisites: MAT 171
This course is a laboratory for MAT 171. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively.
This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

MAT 172 Precalculus Trigonometry 3 0 0 3
Prerequisites: A grade of "C" or better in MAT 171
Corequisites: MAT 172a
This is the second of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed

on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, vectors, and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

MAT 172A Precalculus Trigonometry Lab 0 2 0 1
Prerequisites: A grade of "C" or better in MAT 171
Corequisites: MAT 172
This course is a laboratory for MAT 172. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively.

MAT 175 Precalculus 4 0 0 4
Prerequisites: None
Corequisites: None
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.

MAT 175A Precalculus Lab 0 2 0 1
Prerequisites: None
Corequisites: MAT 175
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.

MAT 223 Applied Calculus 2 2 0 3
Prerequisites: MAT 122
Corequisites: None
This course provides an introduction to the calculus concepts of differentiation and integration by way of application and is designed for engineering technology students. Topics include limits, slope, derivatives, related rates, areas, integrals, and applications. Upon completion, students should be able to demonstrate an understanding of the use of calculus and technology to solve problems and to analyze and communicate results.

MAT 263 Brief Calculus 3 0 0 3
Prerequisites: A grade of "C" or better in MAT 161, MAT 171, or MAT 175
Corequisites: MAT 263A
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

MAT 263A Brief Calculus Lab 0 2 0 1
Prerequisites: A grade of "C" or better in MAT 161, MAT 171, or MAT 175
Corequisites: MAT 263
This course is a laboratory for MAT 263. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively.

MAT 271 Calculus I 3 2 0 4
Prerequisites: A grade of "C" or better in MAT 172 or MAT 175
Corequisites: None
This course covers in depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable, with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions. *This course has been approved for transfer under the CAA as a general education course in Mathematics.*

MAT 272 Calculus II 3 2 0 4
Prerequisites: A grade of "C" or better in MAT 271
Corequisites: None
This course provides a rigorous treatment of integration and is the second calculus course in a three-course sequence. Topics include applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to use integration and approximation techniques to solve application problems. *This course has been approved for transfer under the CAA as a general education course in Mathematics.*

MAT 273 Calculus III 3 2 0 4
Prerequisites: A grade of "C" or better in MAT 272
Corequisites: None
This course covers the calculus of several variables and is third calculus course in a three-course sequence. Topics include functions of several variables, partial derivatives, multiple integrals, solid analytical geometry, vector-valued functions, and line and surface integrals. Upon completion, students should be able to solve problems involving vectors and functions of several variables. *This course has been approved for transfer under the CAA as a general education course in Mathematics.*

MAT 280 Linear Algebra 3 0 0 3
Prerequisites: A grade of "C" or better in MAT 271
Corequisites: None
This course provides a study of linear algebra topics with emphasis on the development of both abstract concepts and applications. Topics include vectors, systems of equations, matrices, determinants, vector spaces, linear transformations in two or three dimensions, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts and appropriate use of linear algebra models to solve application problems. *This course has been approved for transfer under the CAA as a premajor and/or elective course requirement.*

MAT 285 Differential Equations 3 0 0 3
Prerequisites: A grade of "C" or better in MAT 272
Corequisites: None
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. *This course has been approved for transfer under the CAA as a premajor and/or elective course requirement.*

MECHANICAL (MEC Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
MEC	**111**	**Machine Processes I**	1	4	0	3

Prerequisites: None
Corequisites: None
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.

MEC 130 Mechanisms 2 2 0 3
Prerequisites: MAT 121 or MAT 161 or MAT 171
Corequisites: None
This course introduces the purpose and action of various mechanical devices. Topics include cams, cables, gear trains, differentials, screws, belts, pulleys, shafts, levers, lubricants, and other devices. Upon completion, students should be able to analyze, maintain, and troubleshoot the components of mechanical systems.

MEC 131 Metalworking Processes 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the standard practices that are found in a metal workshop. Topics include the proper care/use of basic hand tools and precision measuring instruments and layout procedures/operation of lathes, drill presses, grinders, milling machines, and power saws. Upon completion, students should be able to work safely in the metal workshop and use basic metalworking equipment.

MEC 141 Introduction to Manufacturing Processes 2 2 0 3
Prerequisites: None
Corequisites: None
This course covers the properties and characteristics of manufacturing materials and the processes used to form them. Emphasis is placed on manufacturing materials, heat-treating processes, and manufacturing processes. Upon completion, students should be able to identify physical characteristics of materials and describe processes used to manufacture a part.

MEC 145 Manufacturing Materials I 2 3 0 3
Prerequisites: None
This course introduces a variety of manufacturing materials and common processing techniques. Emphasis is placed on the processing, testing, and application of materials such as wood, metals, plastics, ceramics, and composites. Upon completion, students should be able to demonstrate an understanding of fundamental engineering applications for a variety of materials, including their process capabilities and limitations.

MEC 161 Manufacturing Processes I 3 0 0 3
Prerequisites: None
Corequisites: MEC 161A
This course provides the fundamental principles of value-added processing of materials into usable forms for the customer. Topics include material properties and traditional and non-traditional manufacturing processes. Upon completion, students should be able to specify appropriate manufacturing processing for common engineering materials.

MEC 161A Manufacturing Processes I Lab 0 3 0 1
Prerequisites: None
Corequisites: MEC 161
This course is a laboratory for MEC 161. Emphasis is placed on experiences that enhance the materials presented in MEC 161. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in MEC 161.

MEC 180 Engineering Materials 2 3 0 3
Prerequisites: None
Corequisites: None
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.

MEC 251 Statics 2 2 0 3
Prerequisites: MAT 121 or MAT 161 or MAT 171
Corequisites: None
This course covers the concepts and principles of statics. Topics include systems of forces and moments on structures in two- and three-dimensions in equilibrium. Upon completion, students should be able to analyze forces and moments on structures.

MEC 252 Strength of Materials 2 2 0 3
Prerequisites: MEC 251
Corequisites: None
This course covers the principles and concepts of stress analysis. Topics include centroids, moments of inertia, shear/mount diagrams, and stress and strain. Upon completion, students should be able to perform a stress and strain analysis on structural components.

MEC 260 Fundamentals of Machine Design 2 3 0 3
Prerequisites: MAT 121 or MAT 161 or MAT 171
Corequisites: None
This course introduces the basic elements of machine design. Topics include vectors, moments, friction, velocity, and torque. Upon completion, students should be able to size mechanical components and make component selections from manufacturers' catalogs.

MEC 265 Fluid Mechanics 2 2 0 3
Prerequisites: MAT 121 or MAT 161 or MAT 171
Corequisites: None
This course covers the physical behavior of fluids and fluid systems. Topics include fluid statics and dynamics, laminar and turbulent flow, Bernoulli's Equation, components, applications, and other related topics. Upon completion, students should be able to apply fluid power principles to practical applications.

MEC 267 Thermal Systems 2 2 0 3
Prerequisites: PHY 131 or PHY 151 and MAT 121 or Mat 161 or MAT 171
Corequisites: None
This course introduces the fundamental laws of thermodynamics. Topics include work and energy, open and closed systems, and heat engines. Upon completion, students should be able to demonstrate a knowledge of the laws and principles that apply to thermal power. Special emphasis is also placed on processes of heat transfer: conduction, convection, and radiation.

MEDICAL ASSISTING (MED Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
MED 110	**Orientation to Med Assist**	1	0	0	1

Prerequisites: None
Corequisites: None
This course covers the history of medicine and the role of the medical assistant in the health care setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical environment. Upon completion, students should be able to project a positive attitude and promote the profession of medical assisting. *This course is also available through the Virtual Learning Community (VLC).*

MED 118 Medical Law and Ethics 2 0 0 2
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

MED 121 Medical Terminology I 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

MED 122 Medical Terminology II 3 0 0 3
Prerequisites: MED 121
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

MED 130 Admin Office Proc I 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces medical office administrative procedures. Topics include appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment.

MED 131 Admin Office Proc II 1 2 0 2
Prerequisites: MED 130
Corequisites: None
This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel.

MED 138 Infection/Hazard Control 2 0 0 2
Prerequisites: None
Corequisites: None
This course introduces the student to infection and hazard control procedures necessary for the healthcare worker. topics include introduction to Microbiology, Practical Infection control, Sterilization and Monitoring, Chemical Disinfectants, Aseptic Technique, Infectious Diseases, OSH Standards, and Applicable North Carolina Laws. Upon completion, students should be able to: understand infectious diseases, disease transmission, infection control procedures, biohazard management, OSH Standards, and applicable North Carolina laws.

MED 140 Exam Room Procedures I 3 4 0 5
Prerequisites: BIO 161 OR BIO 163, ENG 111, MAT 110, MED 110, MED 118, MED 121, MED 130, MED 138
Corequisites: MED 150
This course provides instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with exams and treatment, patient education, preparation and administration of medications, EKG, vital signs, and medical emergencies. Upon completion, students should be able to demonstrate competence in exam room procedures.

MED 150 Laboratory Procedures I 3 4 0 5
Prerequisites: BIO 161 OR BIO 163, ENG 111, MAT 110, MED 110, MED 118, MED 121, MED 130, MED 138
Corequisites: MED 140
This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics.

MED 232 Medical Insurance Coding 1 3 0 2
Prerequisites: MED 130, MED 131, MED 140 and MED 150
Corequisites: None
This course is designed to develop coding skills. Emphasis is placed on advanced diagnostic and procedural coding in the outpatient facility. Upon completion, students should be able to demonstrate proficiency in coding for reimbursement.

MED 260 MED Clinical Externship 0 0 15 5
Prerequisites: MED 140, MED 150
Corequisites: MED 262
This course provides the opportunity to apply clinical, laboratory, and administrative skills in a medical facility. Emphasis is placed on enhancing competence in clinical and administrative skills necessary for comprehensive patient care and strengthening professional communications and interactions. Upon completion, students should be able to function as an entry-level health care professional.

MED 262 Clinical Perspectives 1 0 0 1
Prerequisites: MED 140, MED 150
Corequisites: MED 260
This course is designed to explore personal and occupational responsibilities of the practicing medical assistant. Emphasis is placed on problems encountered during externships and development of problem-solving skills. Upon completion, students should be able to demonstrate courteous and diplomatic behavior when solving problems in the medical facility.

MED 264 Med Assisting Overview 2 0 0 2
Prerequisites: MED140 and MED 150
Corequisites: MED 262
This course provides an overview of the complete medical assisting curriculum. Emphasis is placed on all facets of medical assisting pertinent to administrative, laboratory, and clinical procedures performed in the medical environment. Upon completion, students should be able to demonstrate competence in the areas covered on the national certification examination for medical assistants.

MED 270 Symptomatology 2 2 0 3
Prerequisites: MED 122 and BIO 161 or BIO 163
Corequisites: None
This course covers the study of disease symptoms and the appropriate actions taken by medical assistants in a medical facility in relation to these symptoms. Emphasis is placed on interviewing skills and appropriate triage, preparing patients for procedures, and screening test results. Upon completion, students should be able to recognize how certain symptoms relate to specific diseases, recognize emergency situations, and take appropriate actions

MED 272 Drug Therapy 3 0 0 3
Prerequisites: MED 140 and MED 150
Corequisites: None
This course focuses on major drug groups, including their side effects, interactions, methods of administration, and proper documentation. Emphasis is placed on the theory of drug administration. Upon completion, students should be able to identify, spell, recognize side effects of, and document the most commonly used medications in a physician's office.

MED 276 Patient Education 1 2 0 2
Prerequisites: MED 140, MED 150
Corequisites: None
This course is designed to provide communication skills, basic education principles, and knowledge of available community resources and to apply this knowledge to the clinical setting. Emphasis is placed on identifying appropriate community resources, developing patient education materials, and perfecting written and oral communication skills. Upon completion, students should be able to instruct, communicate effectively, and act as a liaison between the patient and community agencies.

MARKETING AND RETAILING (MKT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
MKT 120	**Principles of Marketing**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making.

MKT 123 Fundamentals of Selling 3 0 0 3
Prerequisites: None
Corequisites: None
This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered.

MKT 221 Consumer Behavior 3 0 0 3
Prerequisites: None
Corequisites: None
This course is designed to describe consumer behavior as applied to the exchange processes involved in acquiring, consuming, and disposing of goods and services. Topics include an analysis of basic and environmental determinants of consumer behavior with emphasis on the decision-making process. Upon completion, students should be able to analyze concepts related to the study of the individual consumer.

MKT 223 Customer Service 3 0 0 3
Prerequisites: None
Corequisites: None
This course stresses the importance of customer relations in the business world. Emphasis is placed on learning how to respond to complex customer requirements and to efficiently handle stressful situations. Upon completion, students should be able to demonstrate the ability to handle customer relations.

MKT 224 International Marketing 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the basic concepts of international marketing activity and theory. Topics include product promotion, placement, and pricing strategies in the international marketing environment. Upon completion, students should be able to demonstrate an understanding of the techniques covered.

MEDICAL LABORATORY TECHNOLOGY (MLT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
MLT 110	**Intro to MLT**	2	3	0	3

Prerequisites: None
Corequisites: None
This course introduces all aspects of the medical laboratory profession. Topics include health care/laboratory organization, professional ethics, basic laboratory techniques, safety, quality assurance, and specimen collection. Upon completion, students should be able to demonstrate a basic understanding of laboratory operations and be able to perform basic laboratory skills.

MLT 111 Urinalysis & Body Fluids 1 3 0 2
Prerequisites: None
Corequisites: None
This course introduces the laboratory analysis of urine and body fluids. Topics include physical, chemical, and microscopic examination of the urine and body fluids. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting urinalysis and body fluid tests

MLT 115 Laboratory Calculations 2 0 0 2
Prerequisites: None
Corequisites: None
This course is designed to present mathematical operations used in the medical laboratory. Topics include use of basic math processes, systems of measurement, conversion factors, solutions, and dilutions. Upon completion, students should be able to solve practical problems in the context of the medical laboratory.

MLT 118 Medical Lab Chemistry 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the basic medical laboratory chemical principles. Emphasis is placed on selected topics from inorganic, organic, and biological chemistry. Upon completion, students should be able to demonstrate an understanding of the relationship between basic chemical principles and the medical laboratory function.

MLT 120 Hematology/Hemostasis I 3 3 0 4
Prerequisites: BIO 163, MLT 110, MLT 111, MLT 115, MLT 118, MLT 140
Corequisites: None
This course introduces the theory and technology used in analyzing blood cells and the study of hemostasis. Topics include hematology, hemostasis, and related laboratory testing. Upon completion, students should be able to demonstrate theoretical comprehension of hematology/hemostasis, perform diagnostic techniques, and correlate laboratory findings with disorders.

MLT 125 Immunohematology I 4 3 0 5
Prerequisites: BIO 163, MLT 110, MLT 111, MLT 115, MLT 118, MLT 140
Corequisites: None
This course introduces the immune system and response; basic concepts of antigens, antibodies, and their reactions; and applications in transfusion medicine and serodiagnostic testing. Emphasis is placed on immunological and blood banking techniques including concepts of cellular and humoral immunity and pretransfusion testing. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting routine immunological and blood bank procedures.

MLT 130 Clinical Chemistry I 3 3 0 4
Prerequisites: BIO 163, MLT 110, MLT 111, MLT 115, MLT 118, MLT 140
Corequisites: None
This course introduces the quantitative analysis of blood and body fluids and their variations in health and disease. Topics include clinical biochemistry, methodologies, instrumentation, and quality control. Upon completion, students should be able to demonstrate theoretical comprehension of clinical chemistry, perform diagnostic techniques, and correlate laboratory findings with disorders.

MLT 140 Intro to Microbiology 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces basic techniques and safety procedures in clinical microbiology. Emphasis is placed on the morphology and identification of common pathogenic organisms, aseptic technique, staining techniques, and usage of common media. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting basic clinical microbiology procedures.

MLT 217 Professional Issues 0 3 0 1
Prerequisites: MLT 230, MLT 266, MLT 280
Corequisites: None
This course surveys professional issues in preparation for career entry. Emphasis is placed on work readiness and theoretical concepts in microbiology, immunohematology, hematology, and clinical chemistry. Upon completion, students should be able to demonstrate competence in career entry-level areas and be prepared for the national certification examination.

MLT 220 Hematology/Hemostasis II 2 3 0 3
Prerequisites: MLT 120, MLT 125, MLT 130, MLT 240
Corequisites: None
This course covers the theories and techniques used in the advanced analysis of human blood cells and hemostasis. Emphasis is placed on the study of hematologic disorders, abnormal cell development and morphology, and related testing. Upon completion, students should be able to demonstrate a theoretical comprehension and application of abnormal hematology and normal and abnormal hemostasis.

MLT 230 Clinical Chemistry II 2 3 0 3
Prerequisites: MLT 130, MLT 220, MLT 254
Corequisites: None
This course is designed to supplement the biochemical and physiologic theory presented in MLT 130. Emphasis is placed on special chemistry techniques and methodologies. Upon completion, students should be able to recognize and differentiate technical and physiological causes of unexpected test results.

MLT 240 Special Clin Microbiology 2 3 0 3
Prerequisites: BIO 163, MLT 110, MLT 111, MLT 115, MLT 118, MLT 140
Corequisites: None
This course is designed to introduce special techniques in clinical microbiology. Emphasis is placed on advanced areas in microbiology. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting specialized clinical microbiology procedures.

MLT 254 MLT Practicum I 0 0 12 4
Prerequisites: MLT 120, MLT 125, MLT 130, MLT 240
Corequisites: None
This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

MLT 266 MLT Practicum II 0 0 18 6
Prerequisites: MLT 220, MLT 254
Corequisites: None
This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

MLT 276 MLT Practicum III 0 0 18 6
Prerequisites: MLT 230, MLT 266, MLT 280
Corequisites: None
This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

MLT 280 Special Practice Lab 0 3 0 1
Prerequisites: MLT 220, MLT 254
Corequisites: None
This course provides additional medical laboratory experience. Emphasis is placed on laboratory skills and techniques. Upon completion, students should be able to demonstrate proficiency in laboratory skills and techniques.

MAGNETIC RESONANCE IMAGING (MRI Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
MRI	**213**	**MR Patient Care & Safety**	2	0	0	2

Prerequisites: None
Corequisites: MRI 216, MRI 250
This course covers magnetic field safety issues concerning patients and other healthcare personnel. Emphasis is placed on screening skills, biological magnetic field effects, and the management of an MR facility. Upon completion, the student should be able to demonstrate a safe MR environment for patients and all personnel.

MRI 214 MRI Procedures I 2 0 0 2
Prerequisites: None
Corequisites: MRI 217, MRI 241, MRI 260
This course introduces scan procedures for the central nervous and musculoskeletal systems with MRI imaging.
Emphasis is placed on patient set-up, scan parameters, methods of data acquisition, and contrast administration with each of these types of procedures. Upon completion, students should be able to demonstrate all aspects of MR imaging to successfully scan the central nervous and musculoskeletal systems.

MRI 215 MRI Procedures II 2 0 0 2
Prerequisites: MRI 214
Corequisites: MRI 218, MRI 242, MRI 270
This course provides advanced scan procedures for the neck, chest, abdomen, and pelvic systems with MR imaging. Emphasis is placed on patient set-up, scan parameters, methods of data acquisition, and contrast administration with each of these types of procedures. Upon completion, students should be able to demonstrate all aspects of MR imaging to successfully scan the chest, abdomen, and pelvic systems.

MRI 216 MRI Instrumentation 2 0 0 2
Prerequisites: None
Corequisites: MRI 213, MRI 250
This course covers instrumentation utilized to produce the magnetic fields allowing MRI imaging to take place.
Emphasis will be placed on equipment operations and use, inclusive of the static field, gradient fields, and the radiofrequency fields. Upon completion, the student should be able to demonstrate an understanding of the utilization of all MRI equipment in an MRI facility.

MRI 217 MRI Physics I 2 0 0 2
Prerequisites: MRI 216
Corequisites: MRI 214, MRI 241, MRI 260
This course is designed to cover the basic physics fundamentals of magnetic resonance imaging.
Emphasis is placed on the historical development, basic imaging principles, and use of basic scan parameters and pulse sequences. Upon completion, the student should be able to demonstrate an understanding of the basic fundamentals of magnetic resonance.

MRI 218 MRI Physics II 2 0 0 2
Prerequisites: MRI 217
Corequisites: MRI 215, MRI 242, MRI 270
This course is designed to cover the advanced physics concepts of magnetic resonance imaging. Emphasis is placed on advanced imaging parameters and techniques, angiography methods, image artifacts, and quality control. Upon completion, the student should be able to demonstrate an understanding of the advanced physics concepts of magnetic resonance imaging.

MRI 241 MRI Anatomy & Path I 2 0 0 2
Prerequisites: None
Corequisites: MRI 214, MRI 217, MRI 260
This course covers anatomical and pathological information about the components of the central nervous and musculoskeletal system. Emphasis is placed upon identification of anatomy and pathology on MRI images of the central nervous and musculoskeletal systems. Upon completion, the student should be able to identify anatomy and pathology of the central nervous and musculoskeletal systems.

MRI 242 MRI Anatomy & Path II 2 0 0 2
Prerequisites: MRI 241
Corequisites: MRI 215, MRI 218, MRI 270
This course covers anatomical and pathological information about the components of the neck, chest, abdomen, and pelvic systems. Emphasis is placed upon identification of anatomy and pathology on MRI images of the neck, chest, abdomen, and pelvic systems. Upon completion, the student should be able to identify anatomy and pathology of the neck, chest, abdomen, and pelvic systems.

MRI 250 MRI Clinical Ed I 0 0 12 4
Prerequisites: None
Corequisites: MRI 213, MRI 216
This course provides experience in the MR clinical setting with attention to basic MR scan procedures. Emphasis is placed on patient care, screening, contrast administration, and manipulation of MR equipment. Upon completion, students should be able to demonstrate selected MR procedures/techniques in the areas of patient screening, contrast administration, and manipulation of MR equipment.

MRI 260 MRI Clinical Ed II 0 0 21 7
Prerequisites: MRI 250
Corequisites: MRI 214, MRI 217, MRI 241
This course provides advanced experience in the MR clinical setting with attention to central nervous and musculoskeletal system imaging. Emphasis is placed on demonstration of methods of data acquisition with respect to central nervous and musculoskeletal system imaging. Upon completion, students should be able to demonstrate selected MR procedures/techniques as they relate to the central nervous system and musculoskeletal imaging.

MRI 270 MRI Clinical Ed III 0 0 24 8
Prerequisites: MRI 260
Corequisites: MRI 215, MRI 218, MRI 242
This course provides additional advanced experience in the MR clinical setting with attention to neck, chest, abdomen, and pelvic system imaging. Emphasis is placed on demonstration of methods of data acquisition with respect to neck, chest, abdomen, and pelvic system imaging. Upon completion, students should be able to selected MR procedures/techniques that are used in neck, chest, abdomen, and pelvic system imaging.

MRI 271 MRI Capstone 1 0 0 1
Prerequisites: None
Corequisites: None
This course provides experience using 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 knowledge required of any entry level MR technologist.

MILITARY SCIENCE (MSI Prefix)

Please direct inquiries regarding MSI courses to:
Master Seargeant Michael Matheny
Phone: 919-866-5686
Email: mcmatheny@waketech.edu

			Class	Lab	Clin/ WExp	Credit Hours
MSI	**110**	**Military Science I**	1	0	0	1

Prerequisites: None
Corequisites: None
This course introduces military-style training and confidence building, including military weapons firing, rappelling, and other related material. Emphasis is placed on US Army and ROTC organization, leadership and management techniques, principles of war, evolution of weapons, and military tactics. Upon completion, students should be able to identify and explain the basics of military science and put into practice the art of organizing, motivating, and leading others.

MSI 120 Military Science II 2 0 0 2
Prerequisites: None
Corequisites: None
This course covers the use of maps and compasses for land navigation, leadership principles and techniques, and military written and oral communication. Topics include orienteering compass techniques, assault boat training, time management, military briefings, and basic survival skills. Upon completion, students should be able to fulfill requirements for entry into the ROTC advanced program and compete for continuing ROTC scholarships.

MSI 210 Military Science III 2 0 0 2
Prerequisites: None
Corequisites: None
This course emphasizes basic concepts in leadership, team building, and management. Topics include land navigational skills, basic first aid, oral communication, military briefings and personal management skills. Upon completion, students should be able to manage and communicate effectively in a small team environment.

MSI 220 Military Science IV 2 0 0 2
Prerequisites: None
Corequisites: None
This course completes the preparation for accession into the ROTC advanced program. Topics include introduction to the Leadership Development Program (LDP), operation orders, advance land navigation techniques, small unit tactics, and physical training. Upon completion students will be eligible to apply for entry into the ROTC Advanced Program.

THERAPEUTIC MASSAGE (MTH Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
MTH	**110**	**Fundamentals of Massage**	6	9	3	10

Prerequisites: None
Corequisites: BIO 163 and ACA 111
This course introduces concepts basic to the role of the massage therapist. Emphasis is placed on beginning theory and techniques of body work as well as skill in therapeutic touch. Upon completion of the course, the student should be able to apply basic practical massage therapy skills.

MTH 120 Therapeutic Massage Applications 6 9 3 10
Prerequisites: MTH 110 and BIO 163
Corequisites: None
This course provides an expanded knowledge and skill base for the massage therapist. Emphasis is placed on selected therapeutic approaches throughout the lifespan. Upon completion, students should be able to perform entry level therapeutic massage on various populations.

MTH 121 Clinical Supplement I 0 0 3 1
Prerequisites: None
Corequisites: MTH 110, MTH 120, MTH 125, MTH 210, or MTH 220
This course is designed to introduce the student to a variety of clinical experiences. Emphasis is placed on applying the therapeutic massage process across the lifespan. Upon completion, students should be able to demonstrate delivery of massage techniques in a clinical setting.

MTH 125 Ethics of Massage 2 0 0 2
Prerequisites: MTH 120
Corequisites: None
This course is designed to explore issues related to the practice of massage therapy. Emphasis is placed on ethical, legal, professional, and political issues. Upon completion, students should be able to discuss issues relating to the practice of massage therapy, client/therapist relationships as well as ethical issues.

MUSIC (MUS Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
MUS	**110**	**Music Appreciation**	3	0	0	3

Prerequisites: ENG 090 and RED 090
Corequisites: None
This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).*

MUS 111 Fundamentals of Music 3 0 0 3
Prerequisites: None
Corequisites: None
This course is an introductory course for students with little or no music background. Emphasis is placed on music notation, rhythmic patterns, scales, key signatures, intervals, and chords. Upon completion, students should be able to demonstrate an understanding of the rudiments of music.

MUS 112 Introduction to Jazz 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course introduces the origins and musical components of jazz and the contributions of its major artists. Emphasis is placed on the development of discriminating listening habits, as well as the investigation of the styles and structural forms of the jazz idiom. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

MUS 113 American Music 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course introduces various musical styles, influences, and composers of the United States from pre-Colonial times to the present. Emphasis is placed on the broad variety of music particular to American culture. Upon completion, students should be able to demonstrate skills in basic listening and understanding of American music. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

MUS 114 Non-Western Music 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course provides a basic survey of the music of the non-Western world. Emphasis is placed on non-traditional instruments, sources, and performing practices. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of non-Western music. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

MUS 121 Music Theory I 3 2 0 4
Prerequisites: MUS 111 or instructor permission
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

MUS 122 Music Theory II 3 2 0 4
Prerequisites: MUS 121 or instructor permission
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

MUS 131 Chorus I 0 2 0 1
Prerequisites: None
Corequisites: None
This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

MUS 132 Chorus II 0 2 0 1
Prerequisites: MUS 131
Corequisites: None
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.

MUS 135 Jazz Ensemble I 0 2 0 1
Prerequisite: RED 090 and ENG 090
Corequisites: None
This course provides an opportunity for those who play an appropriate instrument to gain experience playing in a jazz ensemble. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MUS 136 Jazz Ensemble II 0 2 0 1
Prerequisites: MUS 135
Corequisites: None
This course is a continuation of MUS 135. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MUS 141 Ensemble I 0 0 2 1
Prerequisites: Audition
Corequisites: None
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MUS 142 Ensemble II 0 2 0 1
Prerequisites: MUS 141
Corequisites: None
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.

MUS 151 Class Music I 0 2 0 1
Prerequisites: ENG 080 and RED 080
Corequisites: None
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. *Colleges may use a letter suffix to designate a specific instrument or voice, for example MUS 151P for piano. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MUS 151P Class Music I: Piano 0 2 0 1
Prerequisites: ENG 080 and RED 080
Corequisites: None
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. *Colleges may use a letter suffix to designate a specific instrument or voice, for example MUS 151P for piano. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through **piano** performance.

MUS 151V Class Music I: Voice 0 2 0 1
Prerequisites: ENG 080 and RED 080
Corequisites: None
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. *Colleges may use a letter suffix to designate a specific instrument or voice, for example MUS 151P for piano. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through **voice** performance.

MUS 161 Applied Music I 1 2 0 2
Prerequisites: None
Corequisites: None
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS 162 Applied Music II 1 2 0 2
Prerequisites: MUS 161
Corequisites: None
This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *Colleges may use a letter suffix to designate a specific instrument or voice, for example MUS 162P for piano. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MUS 210 History of Rock Music 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course is a survey of Rock music from the early 1950's to the present. Emphasis is placed on musical groups, soloists, and styles related to the evolution of this idiom and on related historical and social events. Upon completion, students should be able to identify specific styles and to explain the influence of selected performers within their respective eras.

MUS 212 American Musical Theatre 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/ fine arts.*

MUS 213 Opera and Musical Theatre 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/ fine arts.*

MUS 214 Electronic Music I 1 2 0 2
Prerequisites: MUS 111
Corequisites: None
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 for transferability as a premajor and/or elective course requirement.*

MUS 231 Chorus III 0 2 0 1
Prerequisites: MUS 132
Corequisites: None
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.

MUS 232 Chorus IV 0 2 0 1
Prerequisites: MUS 231
Corequisites: None
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.

MUS 241 Ensemble III 0 2 0 1
Prerequisites: MUS 142
Corequisites: None
This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MUS 242 Ensemble IV 0 2 0 1
Prerequisites: MUS 241
Corequisites: None
This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

MUS 261 Applied Music III 1 2 0 2
Prerequisites: MUS 162
Corequisites: None
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. *Colleges may use a letter suffix to designate a specific instrument or voice, for example MUS 261P for piano. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

NURSING ASSISTANT (NAS Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
NAS 101	**Nursing Assistant I**	3	4	3	6

Prerequisites: None
Corequisites: None
This course introduces basic nursing skills required to provide personal care for patients, residents, or clients in a health care setting. Topics include communications, safety, patients' rights, personal care, vital signs, elimination, nutrition, emergencies, rehabilitation, and mental health. Upon completion, students should be able to demonstrate skills necessary to qualify as Nursing Assistant I with the North Carolina Nurse Aide I Registry.

NETWORKING TECHNOLOGY (NET Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
NET	**110**	**Networking Concepts**	2	2	0	3

Prerequisites: None
Corequisites: None
This course introduces students to the networking field. Topics include network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols. *This course is also available through the Virtual Learning Community (VLC).*

NET 112 See SEC 110

NET	**125**	**Networking Basics**	1	4	0	3

Prerequisites: None
Corequisites: None
This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

NET	**126**	**Routing Basics**	1	4	0	3

Prerequisites: NET 125
Corequisites: None
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.

NET 145 See NOS 120

NET 155 See NOS 220

NET 165 See NOS 221

NET	**175**	**Wireless Technology**	2	2	0	3

Prerequisites: NET 110
Corequisites: None
This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Mark-up language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications.

NET	**191**	**Selected Topics in Networking Technology**	-	-	-	1

Prerequisites: NET 125
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis is placed on subject matter appropriate to networking. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

NET	**193**	**Selected Topic in Networking Technology**	2	2	0	3

Prerequisites: NET 110 or NET 125
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis is placed on the subject matter appropriate to networking. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

NET	**196**	**Seminar in Networking Technology: MCSE Upgrading**	-	-	-	1

Prerequisites: NET 125
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis in placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

NET	**197**	**Seminar in Networking Technology: MCSE Security**	-	-	-	2

Prerequisites: NET 125
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis in placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

NET 198 Seminar in Networking Technology - - - 3
Prerequisites: NOS 230
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis in placed on the subject matter appropriate to networking. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

NET 222 See SEC 160

NET 225 Advanced Router and Switching I 1 4 0 3
Prerequisites: NET 126
Corequisites: None
This course introduces advanced router configurations, advanced LAN switching theory and design, VLANs, Novell IPX, and threaded case studies. Topics include router elements and operations, adding routing protocols to a configuration, monitoring IPX operations on the router, LAN segmentation, and advanced switching methods. Upon completion students should be able to describe LAN and network segmentation with bridges, routers, and switches and describe a virtual LAN.

NET 226 Routing & Switching 1 4 0 3
Prerequisites: NET 225
Corequisites: None
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.

NET 230 Wide Area Networking 2 2 0 3
Prerequisites: NET 110
Corequisites: None
This course is designed to introduce significant aspects of network interconnectivity. Topics include LAN-to-LAN, LAN-to-host, LAN-to-WAN connectivity; Internet connections; and voice-video-data transmission. Upon completion, students should be able to demonstrate an understanding of wide area networking.

NET 231 Intrusion Detection 3 0 0 3
Prerequisites: NET 222
Corequisites: None
This course introduces the student to intrusion detection methods in use today. Topics include the types of intrusion detection products and planning and placements of intrusion detection solutions. Upon completion, students should be able to plan and implement intrusion detection solution for networks and host based systems.

NET 232 Security Administration II 2 2 0 3
Prerequisites: NET 222
Corequisites: None
This course provides the skills necessary to design and implement information security controls. Topics include advanced TCP/IP concepts, network vulnerability analysis, and monitoring. Upon completion, students should be able to distinguish between normal anomalous network traffic, identify common network attack patterns, and implement security solutions.

NET 240 Network Design 3 0 0 3
Prerequisites: NET-110 or NET-125 and NET 226, NET 272 or NOS 230, NOS 231 or NOS 232 or NOS 220
Corequisites: None
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.

NET 250 Advanced Networks I 2 2 0 3
Prerequisites: NET 110
Corequisites: None
This course covers advanced network management, security, and server issues. Topics include server types (file, database, fax, communication, FTP, e-mail, CD-ROM), encryption, authentication, remote monitoring, viruses, and disaster recovery. Upon completion, students should be able to perform advanced monitoring and management of various types of servers and networks.

NET 251 Advanced Networks II 2 2 0 3
Prerequisites: NET 250
Corequisites: None
This course is a continuation of NET 250. Topics include further discussion of network management, monitoring and security, as well as additional work with various types of servers. Upon completion, students should be able to detect and resolve problems relating to network security, performance, and recovery on various types of servers.

NET 260 Internet Development and Support 3 0 0 3
Prerequisites: NET 110
Corequisites: None
This course covers issues relating to the development and implementation of Internet related tools and services. Topics include Internet organization, site registration, e-mail servers, Web servers, Web page development, legal issues, firewalls, multimedia, TCP/IP, service providers, FTP, list servers, and gateways. Upon completion, students should be able to develop and support the

Internet services needed within an organization.

NET 270 Scalable Networks Design 1 4 0 3
Prerequisites: None
Corequisites: None
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.

NET 271 Remote Access Networks 1 4 0 3
Prerequisites: NET 226
Corequisites: None
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.

NET 272 Remote Access Networks 1 4 0 3
Prerequisites: NET 271
Corequisites: None
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.

NET 273 Internetworking Support 1 4 0 3
Prerequisites: NET 226, NET 270 and NET 272
Corequisites: None
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.

NET 280 Networking Project 1 4 0 3
Prerequisites: ENG 111, ENG 114, NET 110
Corequisites: None
This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation.

NET 286 Current Trends in Sec Sys 2 2 0 3
Prerequisites: SEC 260 and NOS 220
Corequisites: None
This course introduces topics of current interest in the security industry. Emphasis is placed on evolving technology and trends in security systems. Upon completion, students should be able to critically analyze security issues and topics, establish and deliver informed opinions.

NET 289 Networking Project 1 4 0 3
Prerequisites: None
Corequisites: NET 226
This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation.

NET 291 Selected Topics in Networking Technology - - - 1
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis is placed on subject matter appropriate to networking. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

NET 292 Selected Topics in Networking Technology - - - 2
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis is placed on subject matter appropriate to networking. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

NET 293 Selected Topics in Networking Technology - - - 3
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Networking Technology. Emphasis is placed on subject matter appropriate to networking. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

NETWORKING OPERATING SYSTEM (NOS Prefix)

	Clin/ Credit		Class	Lab	WExp	Hours
NOS	**110**	**Operating System Concepts**	2	3	0	3

Prerequisites: None
Corequisites: None
This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is place on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.

NOS 120 Linux/UNIX Single User 2 2 0 3
Prerequisites: NOS 110
Corequisites: None
This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles.

NOS 130 Windows Single User 2 2 0 3
Prerequisites: NOS 110
Corequisites: None
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment.

NOS 220 Linux/UNIX Admin I 2 2 0 3
Prerequisites: NOS 120
Corequisites: None
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.

NOS 221 Linux/UNIX Admin II 2 2 0 3
Prerequisites: NOS 220
Corequisites: None
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.

NOS 222 Linux/UNIX Admin III 2 2 0 3
Prerequisites: NOS 221
Corequisites: None
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.

NOS 230 Windows Admin I 2 2 0 3
Prerequisites: NOS 130
Corequisites: None
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.

NOS 231 Windows Admin II 2 2 0 3
Prerequisites: NOS 230
Corequisites: None
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.

NOS 232 Windows Admin III 2 2 0 3
Prerequisites: NOS 231
Corequisites: None
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.

NURSING (NUR Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
NUR	**111**	**Intro to Health Concepts**	4	6	6	8

Prerequisites: None
Corequisites: None
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 112 Health-Illness Concepts 3 0 6 5
Prerequisites: NUR 111
Corequisites: None
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.

NUR 113 Family Health Concepts 3 0 6 5
Prerequisites: NUR 111
Corequisites: None
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.

NUR 114 Holistic Health Concepts 3 0 6 5
Prerequisites: NUR 111
Corequisites: None
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.

NUR 211 Health Care Concepts 3 0 6 5
Prerequisites: NUR 111
Corequisites: None
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 212 Health System Concepts 3 0 6 5
Prerequisites: NUR 111
Corequisites: None
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.

NUR 213 Complex Health Concepts 4 3 15 10
Prerequisites: NUR 111, NUR 112, NUR 113, NUR 114, NUR 211, and NUR 212
Corequisites: None
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.

NUR 214 Nsg Transition Concepts 3 0 3 4
Prerequisites: ENG 111, PSY 150, PSY 241, BIO 168, BIO 169 and BIO 155
Corequisites: BIO 271
This course is designed to introduce concepts within the three domains of the individual, healthcare, and nursing as the LPN transitions to the ADN role. Emphasis is placed on the concepts within each domain including evidenced-based practice, quality

improvement, communication, safety, interdisciplinary team, clinical decision-making, informatics, assessment, caring, and health-wellness-illness. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

OPERATING SYSTEMS (OSS Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
OSS 120	**Introduction to AIX**	2	2	0	3

Prerequisites: None
Corequisites: None
This course introduces students to customizing and handling common AIX system administrator tasks in a multi-user environment. Topics include installation, system management tools, print queues, device drivers, file systems security, user administration, and scheduling techniques. Upon completion, students should be able to install AIX systems, manage file systems and group accounts, configure devices and implement customized access and security tasks.

OSS 160	**AIX Systems Administration I**	2	2	0	3

Prerequisites: OSS 120
Corequisites: None
This course introduces students to customizing and handling common AIX system administrator tasks in a multi-user environment. Topics include installation, system management tools, print queues, device drivers, file systems security, user administration, and scheduling techniques. Upon completion, students should be able to install AIX systems, manage file systems and group accounts, configure devices and implement customized access and security tasks.

OSS 220	**AIX Systems Administration II**	2	2	0	3

Prerequisites: OSS 160
Corequisites: None
This course introduces students to the administrator skills to develop and build advanced AIX. Topics include AIX boot sequence, disk management theory and procedures, diagnostics tools, error log, volume group techniques, damp facilities, online file system backups and security. Upon completion, students should be able to perform system problem determination procedures, recovery techniques, understand disk management theory and configure auditing in an AIX environment.

OFFICE SYSTEMS TECHNOLOGY (OST Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
OST 080	**Keyboarding Literacy**	1	2	0	2

Prerequisites: None
Corequisites: None
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.

OST 122	**Office Computations**	1	2	0	2

Prerequisites: None
Corequisites: None
This course introduces the keypad and the touch method using the electronic calculator. Topics include mathematical functions in business applications. Upon completion, students should be able to use the electronic calculator to solve a wide variety of problems commonly encountered in business.

OST 131	**Keyboarding**	1	2	0	2

Prerequisites: None
Corequisites: None
This course covers basic keyboarding skills. Emphasis is placed on the touch system, correct techniques, and development of speed and accuracy. Upon completion, students should be able to key at an acceptable speed and accuracy level using the touch system.

OST 132	**Keyboard Skill Building**	1	2	0	2

Prerequisites: OST 080 OR OST 131 OR OST 134
Corequisites: None
This course is designed to increase speed and improve accuracy in keyboarding. Emphasis is placed on diagnostic tests to identify accuracy and speed deficiencies followed by corrective drills. Upon completion, students should be able to keyboard rhythmically with greater accuracy and speed.

OST 134	**Text Entry & Formatting**	2	2	0	3

Prerequisites: OST 080 OR OST 131
Corequisites: None
This course is designed to provide skills needed to increase speed, improve accuracy, and format documents. Topics include letters, memos, tables, and business reports. Upon completion, students should be able to produce documents and key timed writings at speeds commensurate with employability. This course is also available through the Virtual Learning Community (VLC).

OST 135	**Adv Text Entry & Format**	3	2	0	4

Prerequisites: OST 134
Corequisites: None
This course is designed to incorporate computer application skills in the generation of office documents. Emphasis is placed on advanced document production. Upon completion, students should be able to make independent decisions regarding planning,

style, and method of presentation.

OST 136 Word Processing 2 2 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

OST 137 Office Software Applicat 2 2 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

OST 138 Advanced Software Appl 2 2 0 3
Prerequisites: OST 137 OR CIS 111 OR CIS 110
Corequisites: None
This course is designed to improve the proficiency in the utilization of software applications used in business offices through a hands-on approach. Emphasis is placed on in-depth usage of software to create a variety of documents applicable to current business environments. Upon completion, students should be able to master the skills required to design documents that can be customized using the latest software applications. *This course is also available through the Virtual Learning Community (VLC).*

OST 140 Internet Comm/Research 1 2 0 2
Prerequisites: None
Corequisites: None
This course provides a working knowledge of Internet usage and research for the modern office. Emphasis is placed on using search engines, email, Web sites, Web servers, communication services, and e-business to obtain information vital to the current office environment. Upon completion, students should be able to use the Internet to research any office topics required for employment.

OST 141 Medical Terms I-Medical Office 3 0 0 3
Prerequisites: RED 090 and ENG 090, or ENG 111
Corequisites: None
This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

OST 142 Medical Terms II-Medical Office 3 0 0 3
Prerequisites: OST 141
Corequisites: None
This course is a continuation of OST 141 and continues the study, using a language-structure approach, of medical office terminology and vocabulary. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in the remaining systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

OST 148 Med Coding Billing & Insu 3 0 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

OST 149 Medical Legal Issues 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior.

OST 153 Office Finance Solutions 1 2 0 2
Prerequisites: None
Corequisites: None
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.

OST 155 Legal Terminology 3 0 0 3
Prerequisites: None
Corequisites: None
This course covers the terminology appropriate to the legal profession. Topics include legal research, court systems, litigation, civil and criminal law, probate, real and personal property, contracts and leases, domestic relations, equity, and corporations. Upon completion, students should be able to spell, pronounce, define, and accurately use legal terms.

OST 156 Legal Office Procedures 2 2 0 3
Prerequisites: OST 134, OST 136, and OST 155
Corequisites: None
This course covers legal office functions involved in the operation of a law office. Emphasis is placed on procedures in the law office involving the court system, legal research, litigation, probate, and real estate, personal injury, criminal, and civil law. Upon completion, students should be able to demonstrate a high level of competence in performing legal office duties. This course focuses on document preparation for legal documents and pleadings in many different fields of law. *This course is a unique requirement of the Legal Office Systems concentration in the Office Systems Technology program.*

OST 164 Text Editing Applications 3 0 0 3
Prerequisites: Eng 090 and RED 090, or ENG 111
Corequisites: None
This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.

OST 181 Introduction to Office Systems 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the skills and abilities needed in today's office. Topics include effectively interacting with co-workers and the public, processing simple financial and informational documents, and performing functions typical of today's offices. Upon completion, students should be able to display skills and decision-making abilities essential for functioning in the total office context.

OST 184 Records Management 2 2 0 3
Prerequisites: None
Corequisites: None
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. *This course is also available through the Virtual Learning Community (VLC).*

OST 188 Issues in Office Tech 2 0 0 2
Prerequisites: None
Corequisites: None
This course is designed to develop critical thinking skills concerning roles in business and how these contribute to society. Topics include an examination of social, racial, and gender issues and how they affect self-identity. Upon completion, students should be able to demonstrate an understanding of social issues in written and oral assignments.

OST 233 Office Publications Design 2 2 0 3
Prerequisites: OST 136
Corequisites: None
This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications.

OST 236 Adv Word/Information Proc 2 2 0 3
Prerequisites: OST 136
Corequisites: None
This course develops proficiency in the utilization of advanced word/information processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents. *This course is also available through the Virtual Learning Community (VLC).*

OST 241 Medical Office Transcription I 1 2 0 2
Prerequisites: MED 121 or OST 141, OST 134 and OST 164
Corequisites: None
This course introduces machine transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription, proofreading, and use of reference materials as well as vocabulary building. Upon completion, students should be able to prepare accurate and usable transcripts of voice recordings in the covered specialties.

OST 242 Med Ofc Transcription II 1 2 0 2
Prerequisites: OST 241
Corequisites: None
This course continues building transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription and text editing , efficient use of reference materials, increasing transcription speed and accuracy, and improving understanding of medical terminology. Upon completion, students should be able to display competency in accurately transcribing medical documents.

OST 243 Med Office Simulation 2 2 0 3
Prerequisites: OST 148
Corequisites: None
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.

OST 244 Med Document Production 1 2 0 2
Prerequisites: OST 134
Corequisites: None
This course provides production-level skill development in processing medical documents. Emphasis is placed on producing mallable documents through the use of medical-related materials. Upon completion, students should be able to perform competently in preparing accurate, correctly formatted, and usable documents.

OST 247 Procedure Coding 1 2 0 2
Prerequisites: MED 121 or OST 141, MED 122, or OST 142 and OST 148
Corequisites: None
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.

OST 248 Diagnostic Coding 1 2 0 2
Prerequisites: MED 121 or OST 141, MED 122 or OST 142 and OST 148
Corequisites: None
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.

OST 252 Legal Transcription I 2 2 0 3
Prerequisites: OST 134 or OST 136 and OST 155
Corequisites: None
This course provides experience in transcribing legal correspondence, forms, and documents. Emphasis is placed on developing listening skills to transcribe documents. Upon completion, students should be able to transcribe documents with accuracy.

OST 281 Emerg Issues in Med Ofc 3 0 0 3
Prerequisites: OST 148
Corequisites: None
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.

OST 284 Emerging Technologies 1 2 0 2
Prerequisites: OST 137 or OST 140
Corequisites: None
This course provides opportunities to explore emerging technologies. Emphasis is placed on identifying, researching, and presenting current technological topics for class consideration and discussion. Upon completion, students should be able to understand the importance of keeping abreast of technological changes that affect the office professional.

OST 286 Professional Development 3 0 0 3
Prerequisites: OST 136, OST 164
Corequisites: None
This course covers the personal competencies and qualities needed to project a professional image in the office. Topics include interpersonal skills, health lifestyles, appearance, attitude, personal and professional growth, multicultural awareness, and professional etiquette. Upon completion, students should be able to demonstrate these attributes in the classroom, office, and society.

OST 289 Administrative Office Mgt 2 2 0 3
Prerequisites: OST 164 and either OST 134 or OST 136, OST 138, OST 236
Corequisites: None
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.

PHLEBOTOMY (PBT Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
PBT 100	**Phlebotomy Technology**	5	2	0	6

Prerequisites: Enrollment in the Phlebotomy Technology program
Corequisites: PBT 101
This course provides instruction in the skills needed for the proper collection of blood and other specimens used for diagnostic testing. Emphasis is placed on ethics, legalities, medical terminology, safety and universal precautions, health care delivery systems, patient relations, anatomy and physiology, and specimen collection. Upon completion, students should be able to demonstrate competence in the theoretical comprehension of phlebotomy techniques.

PBT 101 Phlebotomy Practicum 0 0 9 3
Prerequisites: Enrollment in the Phlebotomy Technology program
Corequisites: PBT 100
This course provides supervised experience in the performance of venipuncture and microcollection techniques in a clinical facility. Emphasis is placed on patient interaction and application of universal precautions, proper collection techniques, special procedures, specimen handling, and data management. Upon completion, students should be able to safely perform procedures necessary for specimen collections on patients in various health care settings.

PROCESS CONTROL INSTRUMENTATION (PCI Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
PCI 161	**Introduction to Instrumentation**	0	2	0	1

Prerequisites: None
Corequisites: None
This course introduces various industrial and manufacturing process control environments by taking field trips to related industrial facilities. Topics include job descriptions, titles, and opportunities associated with the field of industrial process control instrumentation. Upon completion, students should be able to demonstrate an understanding of the job opportunities available in the field of process control instrumentation.

PCI 261 Process Measurement 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the concepts associated with the measurement of different process variables. Topics include theory and applications involved with the process variables of flow, level, pressure, and temperature. Upon completion, students should be able to understand basic process measurements and demonstrate the ability to calibrate process control instrumentation.

PCI 262 Introduction to Process Control 3 3 0 4
Prerequisites: ELC 131
Corequisites: None
This course introduces process control and related instrumentation devices. Topics include basic process control theory, PID diagrams, and calibration methods associated with transducers, transmitters, control valves, and related process devices. Upon completion, students should be able to understand and troubleshoot basic process control devices and systems.

PCI 263 Advanced Process Control 3 3 0 4
Prerequisites: PCI 262
Corequisites: None
This course covers advanced process control and instrumentation associated with closed and open loop-type process control and systems. Topics include analysis of cascade, distributed control, feedback, and feedforward process control systems using PID and advanced control applications. Upon completion, students should be able to understand and implement advanced process control and instrumentation systems.

PHYSICAL EDUCATION (PED Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
PED 110	**Fitness and Wellness for Life**	1	2	0	2

Prerequisites: None
Corequisites: None
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. Classes will be individually structured to accommodate and enhance various levels of fitness.

PED 111 Physical Fitness 0 3 0 1
Prerequisites: None
Corequisites: None
This course provides an individualized approach to physical fitness utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs. Upon completion, students should be able to set up and implement an individualized physical fitness program. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 112 Physical Fitness II 0 3 0 1
Prerequisites: PED 111
Corequisites: None
This course is an intermediate-level fitness class. Topics include specific exercises contributing to fitness and the role exercise plays in developing body systems. Upon completion, students should be able to implement and evaluate an individualized physical fitness program. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 113 Aerobics I 0 3 0 1
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 117 Weight Training I 0 3 0 1
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 119 Circuit Training 0 3 0 1
Prerequisites: None
Corequisites: None
This course covers the skills necessary to participate in a developmental fitness program. Emphasis is placed on the circuit training method which involves a series of conditioning timed stations arranged for maximum benefit and variety. Upon completion, students should be able to understand and appreciate the role of circuit training as a means to develop fitness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 121 Walk, Jog, Run 0 3 0 1
Prerequisites: None
Corequisites: None
This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, or running as a means of achieving fitness. Upon completion, students should be able to understand and appreciate the benefits derived from these activities.

PED 122 Yoga I 0 2 0 1
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 123 Yoga II 0 2 0 1
Prerequisites: PED 122
Corequisites: None
This course introduces more detailed aspects of the discipline of yoga. Topics include breathing and physical postures, relaxation, and mental concentration. Upon completion, students should be able to demonstrate advanced procedures of yoga. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement*

PED 125 Self-Defense-Beginning 0 2 0 1
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 126 Self-Defense: Intermediate 0 2 0 1
Prerequisites: PED 125
Corequisites: None
This course is designed to aid students in building on the techniques and skills developed in PED 125. Emphasis is placed on the appropriate psychological and physiological responses to various encounters. Upon completion, students should be able to demonstrate intermediate skills in self-defense stances, blocks, punches, and kick combinations. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 128 Golf-Beginning 0 2 0 1
Prerequisites: None
Corequisites: None
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. Individualized corrections of fundamental skills are stressed along with their use during course play.

PED 130 Tennis-Beginning 0 2 0 1
Prerequisites: None
Corequisites: None
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. Individualized instruction along with group drills promote stroke development and basic strategy for in-class play.

PED 131 Tennis: Intermediate 0 2 0 1
Prerequisites: PED 130
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 138 Archery 0 2 0 1
Prerequisites: None
Corequisites: None
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. Individualized instruction on fundamental skills enhances performance during class shooting and competition.

PED 139 Bowling-Beginning 0 2 0 1
Prerequisites: None
Corequisites: None
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. Classes stress individualized correction of the approach and delivery along with the introduction of spot bowling and league bowling.

PED 143 Volleyball-Beginning 0 2 0 1
Prerequisites: None
Corequisites: None
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. Individualized instruction enhances fundamental skills along with their use in drills and class play.

PED 145 Basketball-Beginning 0 2 0 1
Prerequisites: None
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PED 175 Horseback Riding I 0 2 0 1
Prerequisites: None
Corequisites: None
This course introduces beginning and non-riders to recreational horseback riding. Topics include riding skills, equipment, handling of horses, mounting, care of the horse, and coordinated horse-rider balance. Upon completion, students should be able to demonstrate riding, safety, and horse management skills.

PED 176 Horseback Riding II 0 2 0 1
Prerequisites: PED 175
Corequisites: None
This course is designed to give advanced riding experiences in a variety of specialized situations. Emphasis is placed on the development of skills such as jumping, rodeo games, and trail riding. Upon completion, students should be able to demonstrate control and management of the horse and perform various riding techniques.

PED 177 Ice Skating 0 2 0 1
Prerequisites: None
Corequisites: None
This course introduces the fundamentals of ice skating. Emphasis is placed on basic positioning, balance, and form on ice. Upon completion, students should be able to demonstrate skills necessary for recreational ice skating.

PED 186 Dancing for Fitness 0 2 0 1
Prerequisites: None
Corequisites: None
This course is designed to develop movement and recreational dance skills, safety, fitness, coordination, and techniques used to teach various groups. Emphasis is placed on participation and practice with adapting dances for ages and ability levels. Upon completion, students should be able to demonstrate knowledge of fitness through social, folk, and square dance participation and instruction. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PHILOSOPHY (PHI Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
PHI	**210**	**History of Philosophy**	3	0	0	3

Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
This course introduces fundamental philosophical issues through an historical perspective. Emphasis is placed on such figures as Plato, Aristotle, Lao-Tzu, Confucius, Augustine, Aquinas, Descartes, Locke, Kant, Wollstonecraft, Nietzsche, and Sartre. Upon completion, students should be able to identify and distinguish among the key positions of the philosophers studied.

PHI	**215**	**Philosophical Issues**	3	0	0	3

Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critique the philosophical components of an issue.

PHI	**220**	**Western Philosophy I**	3	0	0	3

Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
This course covers Western intellectual and philosophic thought from the early Greeks through the medievalists. Emphasis is placed on such figures as the pre-Socratics, Plato, Aristotle, Epicurus, Epictetus, Augustine, Suarez, Anselm, and Aquinas. Upon completion, students should be able to trace the development of leading ideas regarding reality, knowledge, reason, and faith.

PHI	**221**	**Western Philosophy II**	3	0	0	3

Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
This course covers Western intellectual and philosophic thought from post-medievalists through recent thinkers. Emphasis is placed on such figures as Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel, Marx, Mill, and representatives of pragmatism, logical positivism, and existentialism. Upon completion, students should be able to trace the development of leading ideas concerning knowledge, reality, science, society, and the limits of reason.

PHI	**230**	**Introduction to Logic**	3	0	0	3

Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
This course introduces basic concepts and techniques for distinguishing between good and bad reasoning. Emphasis is placed on deduction, induction, validity, soundness, syllogisms, truth functions, predicate logic, analogical inference, common fallacies, and scientific methods. Upon completion, students should be able to analyze arguments, distinguish between deductive and inductive arguments, test validity, and appraise inductive reasoning.

PHI	**240**	**Introduction to Ethics**	3	0	0	3

Prerequisites: A grade of "C" or better in ENG 111
Corequisites: None
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.

PHI	**250**	**Philosophy of Science**	3	0	0	3

Prerequisites: A grade of "C" or better in ENG 111 and MAT 161 or MAT 171 or MAT 175
Corequisites: None
This course introduces the concepts of empirical observations and laws and their role in scientific explanation, prediction, and theory formation. Topics include the relationship between the philosophy of science and inductive/deductive logic, analytic philosophy, logical empiricism, and explanatory paradigms. Upon completion, students should be able to describe the development and role of scientific explanation, prediction, theory formation, and explanatory paradigms in the natural and social sciences. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

PHARMACY (PHM Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
PHM	**110**	**Introduction to Pharmacy**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces pharmacy practice and the technician's role in a variety of pharmacy settings. Topics include medical terminology and abbreviations, drug delivery systems, law and ethics, prescription and medication orders, and the health care system. Upon completion, students should be able to explain the role of pharmacy technicians, read and interpret drug orders, describe quality assurance, and utilize pharmacy references.

PHM	**111**	**Pharmacy Practice I**	3	3	0	4

Prerequisites: None
Corequisites: PHM 110 and PHM 115
This course provides instruction in the technical procedures for preparing and dispensing drugs in the hospital and retail settings under supervision of a registered pharmacist. Topics include drug packaging and labeling, out-patient dispensing, hospital

dispensing procedures, controlled substance procedures, inventory control, and non-sterile compounding. Upon completion, students should be able to perform basic supervised dispensing techniques in a variety of pharmacy settings.

PHM 115 Pharmacy Calculations 3 0 0 3
Prerequisites: None
Corequisites: None
This course provides an introduction to the metric, avoirdupois, and apothecary systems of measurement and the calculations used in pharmacy practice. Topics include ratio and proportion, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration, aliquots, specific gravity and density, and flow rates. Upon completion, students should be able to correctly perform calculations required to properly prepare a medication order.

PHM 115A Pharmacy Calculations Lab 0 2 0 1
Prerequisites: None
Corequisites: None
This course provides an opportunity to practice and perform calculations encountered in pharmacy practice. Emphasis is placed on ratio and proportion, dosage calculations, percentage, reduction/enlargement formulas, aliquots, flow rates, and specific gravity/density. Upon completion, students should be able to perform the calculations required to properly prepare a medication order.

PHM 118 Sterile Products 3 3 0 4
Prerequisites: PHM 110 and PHM 111
Corequisites: None
This course provides an introduction to intravenous admixture preparation and other sterile products, including total parenteral nutrition and chemotherapy. Topics include aseptic techniques; facilities, equipment, and supplies utilized in admixture preparation; incompatibility and stability; laminar flow hoods; immunizations and irrigation solutions; and quality assurance. Upon completion, students should be able to describe and demonstrate the steps involved in preparation of intermittent and continuous infusions, total parenteral nutrition, and chemotherapy.

PHM 120 Pharmacology I 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories. Topics include nutritional products, blood modifiers, hormones, diuretics, cardiovascular agents, respiratory drugs, and gastrointestinal agents. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.

PHM 125 Pharmacology II 3 0 0 3
Prerequisites: PHM 120
Corequisites: None
This course provides a continuation of the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories. Topics include autonomic and central nervous system agents, anti-inflammatory agents, and anti-infective drugs. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.

PHM 132 Pharmacy Clinical 0 0 6 2
Prerequisites: None
Corequisites: None
This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

PHM 133 Pharmacy Clinical 0 0 9 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

PHM 134 Pharmacy Clinical 0 0 12 4
Prerequisites: None
Corequisites: None
This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

PHM 135 Pharmacy Clinical 0 0 15 5
Prerequisites: None
Corequisites: None
This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications,

prepare patient charges, and efficiently operate computers.

PHM 140 Trends in Pharmacy 2 0 0 2
Prerequisites: None
Corequisites: None
This course covers the major issues, trends, and concepts in contemporary pharmacy practice. Topics include professional ethics, continuing education, job placement, and the latest developments in pharmacy technician practice. Upon completion, students should be able to demonstrate a basic knowledge of the topics discussed.

PHM 150 Hospital Pharmacy 3 3 0 4
Prerequisites: None
Corequisites: PHM 118
This course provides an in-depth study of hospital pharmacy practice. Topics include hospital organizational structure, committee functions, utilization of reference works, purchasing and inventory control, drug delivery systems, and intravenous admixture preparation. Upon completion, students should be able to explain hospital organization/committee functions, interpret and enter patient orders, fill unit-dose cassettes, and prepare intravenous admixtures.

PHM 155 Community Pharmacy 2 2 0 3
Prerequisites: None
Corequisites: None
This course covers the operational procedures relating to retail pharmacy. Emphasis is placed on a general knowledge of over-the-counter products, prescription processing, business/inventory management, and specialty patient services. Upon completion, students should be able to provide technical assistance and support to the retail pharmacist.

PHM 160 Pharm Dosage Forms 3 0 0 3
Prerequisites: None
Corequisites: None
This course is a study of pharmaceutical dosage forms and considerations in their manufacture. Topics include bioavailability, routes of administration, tablets, capsules, solutions, syrups, suspensions, elixirs, aerosols, transdermals, topicals, ophthalmics, otics, and other dosage forms. Upon completion, students should be able to describe the characteristics of the major dosage forms and explain how these characteristics affect the action of the drug.

PHM 165 Pharmacy Prof Practice 2 0 0 2
Prerequisites: None
Corequisites: None
This course provides a general overview of all aspects of pharmacy technician practice. Emphasis is placed on pharmacy law, calculations, compounding, pharmacology, and pharmacy operations. Upon completion, students should be able to demonstrate competence in the areas required for the Pharmacy Technician Certification Examination.

PHYSICS (PHY Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
PHY	**121**	**Applied Physics I**	3	2	0	4

Prerequisites: None
Corequisites: None
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.

PHY 131 Physics-Mechanics 3 2 0 4
Prerequisites: MAT 121
Corequisites: None
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.

PHY 133 Physics-Sound and Light 3 2 0 4
Prerequisites: PHY 131
Corequisites: None
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.

PHY 151 College Physics I 3 2 0 4
Prerequisites: A grade of “C” or better in MAT 161 or MAT 171 or MAT 175
Corequisites: None
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY 152 College Physics II 3 2 0 4
Prerequisites: A grade of "C" or better in PHY 151
Corequisites: None
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved for transfer under the CAA as a general education course in Natural Science.*

PHY 153 Modern Topics in Physics 3 2 0 4
Prerequisites: PHY 151
Corequisites: None
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.

PHY 251 General Physics I 3 3 0 4
Prerequisites: A grade of "C" or better in MAT 271
Corequisites: MAT 272
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved for transfer under the CAA as a general education course in Natural Science.*

PHY 252 General Physics II 3 3 0 4
Prerequisites: A grade of "C" or better in MAT 272 and PHY 251
Corequisites: None
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved for transfer under the CAA as a general education course in Natural Science.*

PLASTICS (PLA Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
PLA 110	**Introduction to Plastics**	2	0	0	2

Prerequisites: None
Corequisites: None
This course introduces the plastics processing industry, including thermoplastics and thermosets. Emphasis is placed on the description, classification, and properties of common plastics and processes and current trends in the industry. Upon completion, students should be able to describe the differences between thermoplastics and thermosets and recognize the basics of the different plastic processes.

PLA 115 Polymer Processing 2 3 0 3
Prerequisites: None
Corequisites: None
This course introduces theory and hands-on experience in common polymer processing techniques. Topics include injection molding, extrusion, thermoforming, blow molding, casting, roll forming, thermofusion, and other processes. Upon completion, students should be able to understand the setup, operation, and troubleshooting of common plastic processing equipment.

PLA 120 Injection Molding 2 3 0 3
Prerequisites: None
Corequisites: None
This course provides theory and processing experience with the injection molding process. Topics include machine type, molds, controls, machine-polymer part relationship, molding factors, troubleshooting, and molding problems/solutions. Upon completion, students should be able to demonstrate an understanding of machine setup and operation and be able to optimize common injection molding machines.

PLA 210 Mold Maintenance/Design 2 3 0 3
Prerequisites: None
Corequisites: None
This course provides an in-depth study of the design, maintenance, and repair of molds used in the plastics industry. Topics include mold/die components, materials, types, functions, heating/cooling, designs, cleaning, and repair. Upon completion, students should be able to describe and utilize various types and functions of molds and gates and understand typical plastic design rules.

PLA 215 Polymeric Materials 2 3 0 3
Prerequisites: None
Corequisites: None
This course provides an overview of polymeric materials, from commodity grade to advanced/specialty resins. Topics include chemistry, properties, material characterization, testing, and toxicity. Upon completion, students should be able to demonstrate an understanding of the hierarchy of plastics and how it affects material selection, testing, and safety.

PLA 225 Extrusion 2 3 0 3
Prerequisites: None
Corequisites: None
This course provides theory and processing experience with the extrusion molding process. Topics include safe start-up, operation, and shutdown of machines, machine components, blown film, sheet, coating, pipe/profiles, wire coating, and fibers. Upon completion, students should be able to setup, operate, and troubleshoot the extrusion process and its variations.

PLUMBING (PLU Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
PLU	**110**	**Modern Plumbing**	4	15	0	9

Prerequisites: None
Corequisites: None
This course introduces the tools, equipment, and materials associated with the plumbing industry. Topics include safety, use and care of tools, recognition and assembly of fittings and pipes, and other related topics. Upon completion, students should be able to safely assemble various pipes and fittings in accordance with state code requirements.

PLU 120 Plumbing Applications 4 15 0 9
Prerequisites: None
Corequisites: None
This course covers general plumbing layout, fixtures, and water heaters. Topics include drainage, waste and vent pipes, water service and distribution, fixture installation, water heaters, and other related topics. Upon completion, students should be able to safely install common fixtures and systems in compliance with state and local building codes.

PLU 120A Plumbing Applications Part 1 3 6 0 5
Prerequisites: None
Corequisites: None
This course covers general plumbing layout, fixtures, and water heaters. Topics include drainage, waste and vent pipes, water service and distribution, fixture installation, water heaters, and other related topics. Upon completion, students should be able to safely install common fixtures and systems in compliance with state and local building codes. This is part one of a two-part course.

PLU 120B Plumbing Applications Part 2 1 9 0 4
Prerequisites: PLU 120A
Corequisites: None
This course covers general plumbing layout, fixtures, and water heaters. Topics include drainage, waste and vent pipes, water service and distribution, fixture installation, water heaters, and other related topics. Upon completion, students should be able to safely install common fixtures and systems in compliance with state and local building codes. This is part two of a two-part course.

PLU 130 Plumbing Systems 3 9 0 6
Prerequisites: None
Corequisites: None
This course covers the maintenance and repair of plumbing lines and fixtures. Emphasis is placed on identifying and diagnosing problems related to water, drain and vent lines, water heaters, and plumbing fixtures. Upon completion, students should be able to identify and diagnose needed repairs to the plumbing system.

PLU 140 Introduction to Plumbing Codes 1 2 0 2
Prerequisites: None
Corequisites: PLU 192
This course covers plumbing industry codes and regulations. Emphasis is placed on North Carolina regulations and the minimum requirements for plumbing materials and design. Upon completion, students should be able to research and interpret North Carolina plumbing codes.

PLU 150 Plumbing Diagrams 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces sketching diagrams and interpretation of blueprints applicable to the plumbing trades. Emphasis is placed on plumbing plans for domestic and/or commercial buildings. Upon completion, students should be able to sketch plumbing diagrams applicable to the plumbing trades.

PLU 192A Selected Topics in Plumbing 2 0 0 2
Prerequisites: Varies, based on topic
Corequisites: PLU 140
This course provides an opportunity to explore areas of current interest in Plumbing. Emphasis is placed on subject matter appropriate to plumbing. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

POWER MECHANICS (PME Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
PME	**111**	**Planters and Sprayers**	2	6	0	4

Prerequisites: None
Corequisites: None
This course introduces planters and sprayers as used in modern agriculture. Topics include setup, calibration, tractor preparation,

attachment hardware, and environmental issues. Upon completion, students should be able to set up, adjust, and calibrate sprayers and planters and set up tractors to accommodate attachment hardware. *This course is a unique concentration requirement of the Agricultural Systems concentration in the Heavy Equipment and Transport Technology program.*

PME 112 Consumer Products 3 2 0 4
Prerequisites: None
Corequisites: None
This course introduces garden tractors, equipment, and attachments. Topics include electrical, hydraulic, and power trains and the operation, diagnosis, adjustment, and repair of lawn and turf equipment. Upon completion, students should be able to set up, adjust, diagnose, and repair lawn and garden equipment. . *This course is a unique concentration requirement of the Agricultural Systems concentration in the Heavy Equipment and Transport Technology program.*

PME 113 Construction Equipment Repair 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces construction equipment repair. Topics include product identification, care of tools, product nomenclature, fasteners, and proper lifting and blocking of construction equipment. Upon completion, students should be able to identify products and properly block and secure construction equipment.

PME 117 Equipment Braking Systems 2 3 0 3
Prerequisites: None
Corequisites: None
This course covers fundamental theory, adjustments, and repair of hydraulic and pneumatic braking systems used primarily in mobile construction equipment. Emphasis is placed on braking systems used in construction equipment including pneumatic, hydraulic, dynamic, and inboard brakes. Upon completion, students should be able to use proper diagnostic procedures to identify, repair, or replace components.

PME 118 Undercarriage Components 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the fundamentals, function, repair, adjustments, and safety requirements of undercarriage components on track-equipped machines. Topics include identification, measurement, wear points, adjustments, and operation of components on track-equipped machines. Upon completion, students should be able to properly measure, adjust, rebuild or replace undercarriage components.

PME 121 Component Controls 2 2 0 3
Prerequisites: None
Corequisites: None
This course covers specific operating controls used on modern equipment. Emphasis is placed on the hydraulic and mechanical controls used on power trains. Upon completion, students should be able to identify, diagnose, adjust, and repair control systems used on modern equipment. *This course is a unique concentration requirement of the Agricultural Systems concentration in the Heavy Equipment and Transport Technology program.*

PME 211 Advanced Equipment Repair 2 6 0 4
Prerequisites: None
Corequisites: None
This course provides advanced training in equipment repair through hands-on training along with additional training aids. Emphasis is placed on systems and components found on construction equipment. Upon completion, students should be able to adjust, troubleshoot, and repair most construction equipment systems.

PME 221 Construction Equipment Servicing 1 2 0 2
Prerequisites: None
Corequisites: None
This course covers the servicing requirements for construction equipment. Topics include pre-delivery, after-sales check, routine servicing, and thousand-hour service. Upon completion, students should be able to locate service points, make minor service adjustments, and perform other routine servicing.

POLITICAL SCIENCE (POL Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
POL 110	**Introduction to Political Science**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

POL 120 American Government 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course is a study of the origins, development, structure, and functions of American national government. Topics include the

constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).*

POL 130 State and Local Government 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

POL 210 Comparative Government 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course provides a cross-national perspective on the government and politics of contemporary nations such as Great Britain, France, Germany, and Russia. Topics include each country's historical uniqueness, key institutions, attitudes and ideologies, patterns of interaction, and current political problems. Upon completion, students should be able to identify and compare various nations' governmental structures, processes, ideologies, and capacity to resolve major problems. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

PSYCHOLOGY (PSY Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
PSY 110	**Life Span Development**	3	0	0	3

Prerequisites: None
Corequisites: None
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.

PSY 118 Interpersonal Psychology 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the basic principles of psychology as they relate to personal and professional development. Emphasis is placed on personality traits, communication/leadership styles, effective problem solving, and cultural diversity as they apply to personal and work environments. Upon completion, students should be able to demonstrate an understanding of these principles of psychology as they apply to personal and professional development.

PSY 150 General Psychology 3 0 0 3
Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: None
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).*

PSY 235 Forensic Psychology 3 0 0 3
Prerequisites: PSY 150
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

PSY 237 Social Psychology 3 0 0 3
Prerequisites: A grade of "C" or better in PSY 150 or SOC 210
Corequisites: None
This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social influences on behavior. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

PSY 239 Psychology of Personality 3 0 0 3
Prerequisites: A grade of "C" or better in PSY 150
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

PSY 241 Developmental Psych 3 0 0 3
Prerequisites: A grade of "C" or better in PSY 150
Corequisites: None
This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).*

PSY 246 Adolescent Psychology 3 0 0 3
Prerequisites: PSY 150
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PSY 259 Human Sexuality 3 0 0 3
Prerequisites: A grade of "C" or better in PSY 150
Corequisites: None
This course provides the biological, psychological, and sociocultural aspects of human sexuality and related research. Topics include reproductive biology, sexual and psychosexual development, sexual orientation, contraception, sexually transmitted diseases, sexual disorders, theories of sexuality, and related issues. Upon completion, students should be able to demonstrate an overall knowledge and understanding of human sexuality. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PSY 263 Educational Psychology 3 0 0 3
Prerequisites: A grade of "C" or better in PSY 150
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

PSY 281 Abnormal Psychology 3 0 0 3
Prerequisites: A grade of "C" or better in PSY 150
Corequisites: None
This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).*

PHARMACEUTICAL TECHNOLOGY (PTC Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
PTC 110	**Industrial Environment**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces the pharmaceutical industry, including a broad overview of work in this field. Emphasis is placed on good manufacturing practices (GMP), work conduct, company organization, job expectations, personal safety, hygiene, and company rules and regulations. Upon completion, students should be able to follow good manufacturing practice regulations and inspect a pharmaceutical manufacturing facility for compliance with GMP.

PTC 120 Pharmaceutical Quality Control 3 2 0 4
Prerequisites: MAT 121, PTC 110
Corequisites: None
This course covers the principles and techniques of quality control as found in the pharmaceutical industry. Emphasis is placed on lot inspection, sampling procedures, control charts, vendor auditing, statistical analysis, and Military Standard 105. Upon completion, students should be able to apply and follow the appropriate statistical sampling plans for Pharmaceutical Product Lot Acceptance.

PTC 193 Selected Topics in Industrial Pharmaceutical Technology - - - 3
Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Industrial Pharmaceutical Technology. Emphasis is placed on subject matter appropriate to industrial pharmaceutical. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

PTC 210 Pharmaceutical Industrial Processes 3 2 0 4
Prerequisites: PTC 120
Corequisites: None
This course examines the manufacturing processes for selected pharmaceutical dosage forms. Emphasis is placed on manufacturing and testing of tablets, capsules, sustained release drugs, solutions, emulsions, suspensions, creams, ointments, aerosols, and sterile products. Upon completion, students should be able to demonstrate the processing steps and test procedures for these dosage forms.

PTC 212 Applied Microbiology 3 2 0 4
Prerequisites: BIO 110 or BIO 111, CHM 132
Corequisites: None
This course covers microbiology as it applies to the pharmaceutical industry. Emphasis is placed on types of microorganisms and identification, culture, sterilization, and contamination control. Upon completion, students should be able to explain how microbiology and microbiological control are important to the pharmaceutical industry.

PTC 214 Parenteral Processes 3 2 0 4
Prerequisites: PTC 120
Corequisites: PTC 212
This course covers quality assurance for injectable products. Emphasis is placed on environmental monitoring and sterility, pyrogen, particulate, and package integrity testing. Upon completion, students should be able to demonstrate competence in these test procedures.

PTC 222 Pharmaceutical Process Control 2 2 0 3
Prerequisites: PTC 210
Corequisites: None
This course provides a systematic study of the control of all processes within the pharmaceutical industry. Topics include production economics, plant layout, computer-integrated manufacturing, planning and controls, materials management, routing and scheduling, progress reports, and relationship with quality control. Upon completion, students should be able to demonstrate an understanding of process flow controls, economic considerations, and materials management in modern pharmaceutical manufacturing.

PTC 226 Validation 3 0 0 3
Prerequisites: PTC 210, PTC 214
Corequisites: None
This course covers the methods used in pharmaceutical process and product validation. Emphasis is placed on manufacturing processes, specific dosage forms, FDA rationale, and documentation requirements. Upon completion, students should be able to write a validation protocol and perform validation studies for a variety of pharmaceutical applications.

PTC 228 Pharmaceutical Issues 1 0 0 1
Prerequisites: PTC 110
Corequisites: None
This course provides a forum for discussion of current pharmaceutical topics. Emphasis is placed on events, news, regulations, and technology in pharmaceutical manufacturing. Upon completion, students should be able to demonstrate an understanding of the dynamic nature of the pharmaceutical industry.

RADIOGRAPHY (RAD Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
RAD	**110**	**Rad Intro & Patient Care**	2	3	0	3

Prerequisites: None
Corequisites: RAD 111 and RAD 151
This course provides an overview of the radiography profession and student responsibilities. Emphasis is placed on basic principles of patient care, radiation protection, technical factors, and medical terminology. Upon completion, students should be able to demonstrate basic skills in these areas.

RAD 111 Radiographic Procedures I 3 3 0 4
Prerequisites: Enrollment in the Radiography program
Corequisites: RAD 110, RAD 151
This course provides the knowledge and skills necessary to perform standard radiographic procedures. Emphasis is placed on radiography of the chest, abdomen, extremities, spine, and pelvis. Upon completion, students should be able to demonstrate competence in these areas.

RAD 112 Radiographic Procedures II 3 3 0 4
Prerequisites: RAD 110, RAD 111, RAD 151
Corequisites: RAD 121, RAD 161
This course provides the knowledge and skills necessary to perform standard radiographic procedures. Emphasis is placed on

radiography of the skull, bony thorax, and gastrointestinal, biliary, and urinary systems. Upon completion, students should be able to demonstrate competence in these areas.

RAD 121 Radiographic Imaging I 2 3 0 3
Prerequisites: RAD 110, RAD 111, and RAD 151
Corequisites: RAD 112, RAD 161
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.

RAD 122 Radiographic Imaging II 1 3 0 2
Prerequisites: RAD 112, RAD 121, RAD 161
Corequisites: RAD 131, RAD 171
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.

RAD 131 Radiographic Physics I 1 3 0 2
Prerequisites: None
Corequisites: None
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.

RAD 151 RAD Clinical Ed I 0 0 6 2
Prerequisites: None
Corequisites: RAD 110 and RAD 111
This course introduces patient management and basic radiographic procedures in the clinical setting. Emphasis is placed on mastering positioning of the chest and extremities, manipulating equipment, and applying principles of ALARA. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

RAD 161 Radiographic Clinical Education II 0 0 15 5
Prerequisites: RAD 110, RAD 111, RAD 151
Corequisites: RAD 112, RAD 121
This course provides additional experience in patient management and in more complex radiographic procedures. Emphasis is placed on mastering positioning of the spine, pelvis, head and neck, and thorax and adapting procedures to meet patient variations. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

RAD 171 Radiographic Clinical Education III 0 0 12 4
Prerequisites: RAD 112, RAD 121, RAD 161
Corequisites: RAD 122, RAD 131
This course provides experience in patient management specific to fluoroscopic and advanced radiographic procedures. Emphasis is placed on applying appropriate technical factors to all studies and mastering positioning of gastrointestinal and urological studies. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

RAD 211 Radiographic Procedures III 2 3 0 3
Prerequisites: RAD 122, RAD 131, and RAD 171
Corequisites: RAD 231, RAD 241, and RAD 251
This course provides the knowledge and skills necessary to perform standard and specialty radiographic procedures. Emphasis is placed on radiographic specialty procedures, sectional anatomy, and advanced imaging. Upon completion, students should be able to demonstrate an understanding of these areas.

RAD 231 Radiographic Physics II 1 3 0 2
Prerequisites: RAD 122 and RAD 131 or RAD 171
Corequisites: RAD 211, RAD 241, and RAD 251
This course provides advanced principles of radiation characteristics and production including digital imaging and Computed Tomography (CT). Emphasis is placed on imaging equipment. Upon completion, students should be able to demonstrate an understanding of radiation characteristics and production.

RAD 241 Radiobiology/Protection 2 0 0 2
Prerequisites: RAD 122, RAD 131, RAD 171
Corequisites: RAD 211, RAD 231, RAD 251
This course covers the principles of radiation protection and radiobiology. Topics include the effects of ionizing radiation on body tissues, protective measures for limiting exposure to the patient and personnel, and radiation monitoring devices. Upon completion, students should be able to demonstrate an understanding of the effects and uses of radiation in diagnostic radiology.

RAD 245 Image Analysis 1 3 0 2
Prerequisites: RAD 211, RAD 231, RAD 241 and RAD 251
Corequisites: RAD 261 and RAD 271
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.

RAD 251 Radiographic Clinical Education IV 0 0 21 7
Prerequisites: RAD 122, RAD 131, RAD 171
Corequisites: RAD 211, RAD 231, RAD 241
This course provides the opportunity to continue mastering all basic radiographic procedures and to attain experience in advanced areas. Emphasis is placed on equipment operation, pathological recognition, pediatric and geriatric variations, and a further awareness of radiation protection requirements. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

RAD 261 RAD Clinical Ed V 0 0 21 7
Prerequisites: RAD 211, RAD 231, RAD 241 and RAD 251
Corequisites: RAD 245 and RAD 271
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.

RAD 271 Radiography Capstone 0 3 0 1
Prerequisites: RAD 211, RAD 231, RAD 241, RAD 251
Corequisites: RAD 245, RAD 261
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.

RAD 290 See RAD 271

REAL ESTATE APPRAISAL (REA Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
REA 111	**Introduction to Real Estate Appraisal R-1**	2	0	0	2

Prerequisites: None
Corequisites: None
This course introduces the entire valuation process, with specific coverage of residential neighborhood and property analysis. Topics include basic real property law, concepts of value and operation of real estate markets, mathematical and statistical concepts, finance, and residential construction/design. Upon completion, students should be able to demonstrate adequate preparation for valuation principles and practices.

REA 112 Valuation Principles and Practices R-2 2 0 0 2
Prerequisites: REA 111
Corequisites: None
This course introduces procedures used to develop an estimate of value and how the various principles of value relate to the application of such procedures. Topics include the sales comparison approach, site valuation, sales comparison, the cost approach, the income approach, and reconciliation. Upon completion, students should be able to complete the Uniform Residential Appraisal Report (URAR).

REA 113 Applied Residential Property Valuation R-3 1 0 0 1
Prerequisites: REA 112
Corequisites: REA 111
This course covers the laws and standards practiced by appraisers in the appraisal of residential 1-4 unit properties and small farms. Topics include Financial Institutions Reform and Recovery Enforcement Act (FIRREA), and North Carolina statutes and rules. Upon completion, students should be able to demonstrate eligibility to sit for the NC Appraisal Board license trainee examination.

REA 114 Uniform Standards of Professional Appraisal Practice (USPAP) R-4 1 0 0 1
Prerequisites: REA 113
Corequisites: None
This course introduces all aspects of the appraiser's conduct, ethics, and competency. Topics include appraisal standards, reviews, reports, and the confidentiality provisions as set forth by the North Carolina Appraisal Board. Upon completion, students should be able to sit for the National USPAP examination.

REA 210 Intro Income Prop App G-1 2 0 0 2
Prerequisites: REA 113, REA 114
Corequisites: None
This course introduces concepts and techniques used to appraise real estate income properties. Topics include real estate market analysis, property analysis and site valuation, how to use financial calculators, present value, NOI, and before-tax cash flow. Upon completion, students should be able to estimate income property values using direct capitalization and to sit for the NC Certified Residential Appraiser examination.

REA 212 Advanced Income Capitalization Procedures G-2 2 0 0 2
Prerequisites: REA 210
Corequisites: None
This course expands direct capitalization techniques and introduces yield capitalization. Topics include yield rates, discounted cash flow, financial leverage, and traditional yield capitalization formulas. Upon completion, students should be able to estimate the value

of income producing property using yield capitalization techniques.

REA 213 Applied Income Property Valuation G-3 2 0 0 2
Prerequisites: REA 212
Corequisites: None
This course covers the laws, rules, and standards pertaining to the principles and practices applicable to the appraisal of income properties. Topics include FIRREA, USPAP, Uniform Commercial and Industrial Appraisal Report (UCIAR) form, North Carolina statutes and rules, and case studies. Upon completion, students should be able to prepare a narrative report that conforms to the USPAP and sit for the NC Certified General Appraisal examination.

REA 214 Basic Appraisal Principle 2 0 0 2
Prerequisites: None
Corequisites: None
This course introduces the student to the entire concept of real estate appraisal and the valuation process. Topics include real property concepts and characteristics, legal considerations, influences on real estate value, types of values, and economic principles. Upon completion, students should be able to present an overview of real estate markets and analysis, and ethics, applying it to appraisal theory and practice.

REA 215 Basic Appraisal Procedure 2 0 0 2
Prerequisites: REA-214
Corequisites: None
This course introduces procedures used to develop an estimate of value and how the various principles of value relate to the application of such procedures. Topics include an overview of approaches to value, valuation procedures, property description and residential applications. Upon completion, students should be able to identify and utilize the approaches to value for residential properties.

REA 217 National USPAP 1 0 0 1
Prerequisites: REA-215
Corequisites: None
This course introduces all aspects of the appraisers' conduct, ethics and competency. Topics include appraisal standards, reviews, reports, and the confidentiality provisions as set forth by the Appraisal Standards Board. Upon completion, students should be able to sit for the national Uniform Standards of Professional Appraisal Practice (USPAP) examination.

REA 219 Residential Market Analysis 1 0 0 1
Prerequisites: REA-217
Corequisites: None
This course introduces students to the components of a market analysis and how to test for and analyze highest and best use. Topics include market fundamentals, characteristics and definitions, supply/demand analysis, use of market analysis, test constraints and application of the highest/best use, special considerations and case studies. Upon completion, students should be able to analyze residential markets and know the test constraints for highest and best use.

READING (RED Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
RED 001	**Study Skills Lab**	-	-	-	-

Prerequisites: None
Corequisites: None
Designed to support courses across the curriculum by offering study skills and providing assistance with reading skills such as literal and inferential comprehension, vocabulary skills, recalling details, finding main ideas, and retention of materials.

RED 070 Essential Reading Skills 3 2 0 4
Prerequisites: None
Corequisites: None
This course is designed for those with limited 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.

RED 080 Introduction to College Reading 3 2 0 4
Prerequisites: RED 070 or ENG 075 or placement
Corequisites: None
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.

RED 090 Improved College Reading 3 2 0 4
Prerequisites: RED 080 or ENG 085 or placement
Corequisites: None
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.

RELIGION (REL Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
REL	**110**	**World Religions**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

REL	**111**	**Eastern Religions**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course introduces the major Asian religious traditions. Topics include Hinduism, Buddhism, Taoism, Confucianism, and Shinto. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

REL	**112**	**Western Religions**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course introduces the major western religious traditions. Topics include Zoroastrianism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

REL	**211**	**Introduction to Old Testament**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

REL	**212**	**Introduction to New Testament**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

REL	**221**	**Religion in America**	3	0	0	3

Prerequisites: ENG 090, RED 090
Corequisites: None
This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.*

REAL ESTATE (RLS Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
RLS	**112**	**Broker Prelicensing**	5	0	0	5

Prerequisites: None
Corequisites: None
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.

RLS	**117**	**Real Estate Broker**	4	0	0	4

Prerequisites: RLS 112
Corequisites: None
This course consists of advanced-level instruction on a variety of topics related to Real Estate law and brokerage practices. Topics include: real estate brokerage, finance and sales, RESPA, fair housing issues, selected NC Real Estate License Law and NC Real Estate Commission Rule issues. Upon completion, students should be able to demonstrate knowledge of real estate brokerage, law and finance.

SUBSTANCE ABUSE (SAB Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
SAB	**110**	**Substance Abuse Overview**	3	0	0	3

Prerequisites: None
Corequisites: None
This course provides an overview of the core concepts in substance abuse and dependence. Topics include the history of drug use/abuse, effects on societal members, treatment of addiction, and preventive measures. Upon completion, students should be able to demonstrate knowledge of the etiology of drug abuse, addiction, prevention, and treatment.

SAB	**120**	**Intake and Assessment**	3	0	0	3

Prerequisites: None
Corequisites: None
This course develops processes for establishment of client rapport, elicitation of client information on which therapeutic activities are based, and stimulation of client introspection. Topics include diagnostic criteria, functions of counseling, nonverbal behavior, collaterals and significant others, dual diagnosis, client strengths and weaknesses, uncooperative clients, and crisis interventions. Upon completion, students should be able to establish communication with clients, recognize disorders, obtain information for counseling, and terminate the counseling process.

SAB	**125**	**SA Case Management**	2	2	0	3

Prerequisites: None
Corequisites: None
This course provides case management activities, including record keeping, recovery issues, community resources, and continuum of care. Emphasis is placed on establishing a systematic approach to monitor the treatment plan and maintain quality of life. Upon completion, students should be able to assist clients in the continuum of care as an ongoing recovery process and develop agency networking.

SAB	**210**	**Substance Abuse Counseling**	2	2	0	3

Prerequisites: None
Corequisites: None
This course provides theory and skills acquisition by utilizing intervention strategies designed to obtain therapeutic information, support recovery, and prevent relapse. Topics include counseling individuals and dysfunctional families, screening instruments, counseling techniques and approaches, recovery and relapse, and special populations. Upon completion, students should be able to discuss issues critical to recovery, identify intervention models, and initiate a procedure culminating in cognitive/behavioral change.

SAB	**220**	**Group Techniques/Therapy**	2	2	0	3

Prerequisites: HSE 112
Corequisites: None
This course provides a practical guide to diverse methods of group therapy models used in the specific treatment of substance abuse and addiction. Emphasis is placed on the theory and practice of group therapy models specifically designed to treat the cognitive distortions of addiction and substance abuse. Upon completion, students should be able to skillfully practice the group dynamics and techniques formulated for substance abuse and addiction.

SAB	**240**	**Substance Abuse**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces systems of professional standards, values, and issues in substance abuse counseling. Topics include confidentiality, assessment of personal values, professional responsibilities, competencies, and ethics relative to multicultural counseling and research. Upon completion, students should be able to understand and discuss multiple ethical issues applicable to counseling and apply various decision-making models to current issues.

INFORMATION SYSTEMS SECURITY (SEC Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
SEC	**110**	**Security Concepts**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

SEC	**150**	**Secure Communications**	2	2	0	3

Prerequisites: SEC 110; and NET 110 or NET 125
Corequisites: None
This course provides an overview of current technologies used to provide secure transport of information across networks. Topics include data integrity through encryption, Virtual Private Networks, SSL, SSH, and IPSec. Upon completion, students should be able to implement secure data transmission technologies.

SEC 160 Secure Administration I 2 2 0 3
Prerequisites: SEC 110; and NET 110 or NET 125
Corequisites: None
This course provides an overview of security administration and fundamentals of designing security architectures. Topics include networking technologies, TCP/IP concepts, protocols, network traffic analysis, monitoring, and security best practices. Upon completion, students should be able to identify normal network traffic using network analysis tools and design basic security defenses.

SEC 170 SOHO Security 2 2 0 3
Prerequisites: SEC 110
Corequisites: None
This course introduces security principles and topics related to the small office/home office networking environment. Topics include network topologies, network protocols, security issues, and best practices for SOHO environments. Upon completion, students should be able to design, setup, secure, and manage a small office/home office network.

SEC 210 Intrusion Detection 2 2 0 3
Prerequisites: SEC 160
Corequisites: None
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.

SEC 220 Defense-In-Depth 2 2 0 3
Prerequisites: None
Corequisites: SEC 160
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.

SEC 230 Attack Methodology 3 2 0 4
Prerequisites: SEC 220
Corequisites: None
This course provides the student with an in-depth look at common Internet, network, and host-based attack methodologies. Topics include attack methods such as social engineering, spoofing, denial of service, man-in-the-middle, session hijacking, password cracking, malicious code and web hacking techniques. Upon completion, students should be able to generate anomalous network traffic, identify common network attack patterns, and perform penetration testing.

SEC 240 Wireless Security 2 2 0 3
Prerequisites: SEC 110 and NET 175
Corequisites: None
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.

SEC 260 Secure Admininstration II 2 2 0 3
Prerequisites: SEC 160
Corequisites: None
This course provides the skills necessary to design and implement information security controls. Topics include advanced networking and TCP/IP concepts, network vulnerability analysis, and monitoring. Upon completion, students should be able to distinguish between normal and anomalous network traffic, identify common network attack patterns, and implement security solutions.

SEC 270 Secure Routing/Firewalls 1 4 0 3
Prerequisites: NET 226 and SEC 110
Corequisites: None
This course introduces the principles of securing networks using routers and firewalls. Topics include networking protocols, threat mitigation, firewall configuration, authentication, authorization, intrusion detection, encryption, IPSec, VPNs, and remote access technologies. Upon completion, students should be able to secure internal networks using router and firewall technologies.

SEC 275 Advanced Firewalls 3 2 0 4
Prerequisites: SEC 270
Corequisites: None
This course covers advanced topics in securing networks using firewalls. Topics include networking protocols, firewall status and configuration, syslog configuration, security levels, NAP/PAT, Access Control Lists, Authentication, Authorization and Accounting, VPN, and Remote Access. Upon completion, students should be able to describe, configure, verify, and manage firewall technologies.

SEC 289 Security Capstone Project 1 4 0 3
Prerequisites: SEC 220
Corequisites: None
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.

SIMULATION AND GAME DEVELOPMENT (SGD Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
SGD	**111**	**Introduction to SGD**	2	3	0	3

Prerequisites: None
Corequisites: None
This course provides students with an introduction to simulation and game development. Topics include setting, storytelling, narrative, character design, interface design, game play, internal economy, core mechanics, game genres, AI, the psychology of game design and professionalism. Upon completion, students should be able to demonstrate knowledge of the major aspects of simulation and game design and development.

SGD 112 SGD Design 2 3 0 3
Prerequisites: None
Corequisites: None
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.

SGD 113 SGD Programming 2 3 0 3
Prerequisites: None
Corequisities: None
This course introduces the fundamentals of programming languages and tools employed in simulation and game development. Emphasis is placed on programming concepts used to create simulations and games. Upon completion, students should be able to program simple games and/or simulations.

SGD 114 3D Modeling 2 3 0 3
Prerequisites: SGD 116
Corequisites: None
This course introduces the tools required to create three dimensional (3D) models. Emphasis is placed on exploring tools used to create 3D models. Upon completion, students should be able to create and animate 3D models using 3D modeling tools.

SGD 115 Physically-Based Modeling 2 2 0 3
Prerequisites: Take One: MAT 121, MAT 161, MAT 171, or MAT 175, SGD 113 or CSC 134 or CSC 151
Corequisites: None
This course introduces fundamental physical concepts as applied to the simulation and game design fields. Topics include hands-on programming of vectors, matrices, graphical analyses, forces, laws of motion, work, energy, momentum, properties of matter, and problem-solving methods. Upon completion, students should be able to demonstrate an understanding of the principles studied as applied to the simulation and game design fields.

SGD 122 SG Database Programming 2 3 0 3
Prerequisites: None
Corequisites: None
This course covers the creation and application of databases for simulation and game development. Emphasis is placed on various database and software development kits. Upon completion, students should be able to apply their knowledge of databases to the creation of simulations and games.

SGD 123 Windows Console Programming 2 3 0 3
Prerequisites: SGD 113
Corequisites: None
This course introduces the concepts of Windows and Consol Programming. Emphasis is placed on learning MS Windows, the operating systems of various consoles and programming techniques. Upon completion, students should be able to demonstrate an understanding of Windows and of various consoles' operating systems.

SGD 124 MMO Programming 2 3 0 3
Prerequisites: SGD 113 or CSC 134 or CSC 151
Corequisites: None
This course introduces the concepts of Massive Multiplayer On-line Programming for simulations and games. Emphasis is on learning Massive Multiplayer On-line simulation and game programming techniques. Upon completion, students should be able to create a Massive Multiplayer On-line simulation or game.

SGD 125 SG Artificial Intellig 2 3 0 3
Prerequisites: SGD 113 or CSC 134 or CSC 151
Corequisites: None
This course introduces the artificial intelligence concepts related to simulation and game development.
Emphasis is placed on expert systems. Upon completion, students should be able to describe the basic concepts and procedures related to the development of artificial intelligence systems used in simulations and games.

SGD 126 SG Engine Design 2 3 0 3
Prerequisites: SGD 113 or CSC 134 or CSC 151
Corequisites: None
This course introduces the techniques needed to design and create a simulation/game engine. Emphasis is placed on learning core techniques used to design and create simulation and/or game engines. Upon completion, students should be able to design and

create a simulation or game engine.

SGD 134 SG Quality Assurance 2 2 0 3
Prerequisites: SGD 112
Corequisites: None
This course provides an introduction to software quality assurance as it relates to simulation and game development. Emphasis is placed on designing testing tools, bug databases, and on learning methodologies required for systematic, detail-oriented testing procedures for the simulation and game industry. Upon completion, students should be able to demonstrate the proper skills to obtain a job as a quality assurance tester in the simulation/game industry.

SGD 158 SGD Business Mgmt. 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces the business side of the interactive game industry. Emphasis will be placed on licenses, serious games, psychological profiling, publisher/developer relations, and contract negotiation skills.. Upon completion, students should be able to understand how a game evolves from concept to the customer

SGD 159 SGD Production Mgmt. 3 0 0 3
Prerequisites: SGD 111
Corequisites: None
This course introduces the techniques and methods used in interactive game production and how to manage a project. Emphasis is placed on scheduling, production plans, marketing and budgeting. Upon completion, students should be able to manage a team, track production, and understand the process of project management.

SGD 161 SG Animation 2 3 0 3
Prerequisites: SGD 114
Corequisites: None
This course introduces the fundamental principles of animation used in simulation and game development. Emphasis is placed on a historical survey of animation, aspects of the animation process and animation techniques. Upon completion, students should be able to produce character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

SGD 162 SGD 3D Animation 2 3 0 3
Prerequisites: SGD 114
Corequisites: None
This course introduces the fundamental principles of 3D animation used in simulation and game development. Emphasis is placed on a historical survey of 3D animation, aspects of the 3D animation process and 3D animation techniques. Upon completion, students should be able to produce 3D character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

SGD 163 SG Documenation 2 3 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces the techniques and methods used to create simulation and game production and design documents. Emphasis is placed on the design document to include scheduling, production plans, marketing and budgeting. Upon completion, students should be able to create design and produce documents for any simulation or game.

SGD 164 SG Audio/Video 2 3 0 3
Prerequisites: SGD 111, SGD 174
Corequisites: None
This course introduces various aspects of audio and video and their application in simulations and games. Topics include techniques for producing and editing audio and video for multiple digital mediums. Upon completion, students should be able to produce and edit audio and video for simulations and games.

SGD 165 SG Character Development 2 3 0 3
Prerequisites: None
Corequisites: SGD 114
This course introduces the concepts needed to create a fictional personality for use in digital videos, animations, simulations and games. Topics include aspects of character, developing backgrounds, mannerisms and voice. Upon completion, students should be able to develop characters and backgrounds for simulations and games.

SGD 166 SG Physiology/Kinesi 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the principles of physiology and kinesiology as they relate to simulation and game development. Topics include analysis of the human form and other living organisms. Upon completion, students should be able to demonstrate an understanding of the physiology and kinesiology concepts related to simulation and game development.

SGD 167 SG Ethics 3 0 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces principles of philosophy and ethics as they relate to simulation and game development. Topics include moral philosophy and ethics. Upon completion, students should be able to discuss philosophical and ethical issues related to simulation and game development.

SGD 168 Mobile SG Programming I 2 0 3 3
Prerequisites: SGD 113 or CIS 115
Corequisites: None
This course introduces the wireless simulation and game programming process. Topics include mobile simulation/game engine construction and performance, sprite animation, control interactions, sound effects, music and wireless networks. Upon completion, students should be able to apply wireless simulation/game programming concepts to the creation multiplayer simulations and games.

SGD 169 Linux SG Programming 2 3 0 3
Prerequisites: SGD 113 or CSC 134 or CSC 151
Corequisites: None
This course introduces the concepts of Linux programming for use in simulation and game development. Emphasis is placed on Linux programming and tools. Upon completion, students should be able to create a simple game or simulation using Linux.

SGD 170 Handheld SG Programming 2 3 0 3
Prerequisites: SGD 113 or CSC 134 or CSC 151
Corequisites: None
This course introduces the concepts of hand-held simulation and game development. Emphasis is placed on hand-held game API, including stylus input, system buttons, infrared communications, audio / visual creation and the physics of hand-held game API. Upon completion, students should be able to create a simple simulation or game for a hand-held device.

SGD 171 Flash SG Programming 2 3 0 3
Prerequisites: SGD 111 or SGD 116
Corequisites: None
This course introduces the Flash programming environment for use in simulation and game development.
Topics include timeline effects, extensibility layers, alias text, globalization tools, ActionScript and lingo programming. Upon completion, students should be able to create a simple simulation or game using Flash.

SGD 172 Visual SG Environments 2 0 3 3
Prerequisites: None
Corequisites: None
This course covers the use of virtual reality tools and techniques in simulation and game development. Emphasis is placed on acquiring the skills necessary to create scalable virtual characters and environments for use in simulations and games. Upon completion, students should be able to create a simple game or simulation in a virtual environment.

SGD 173 Lighting/Shading Algori 2 0 3 3
Prerequisites: SGD 214
Corequisites: None
This course introduces the concepts of various lighting and shading algorithms for use in simulation and game development. Topics include various tools used to create light and shadows. Upon completion, students should be able to apply knowledge of various lighting and shading algorithms to the creation of simulations and games.

SGD 174 SG Level Design 2 0 3 3
Prerequisites: SGD 114
Corequisites: None
This course introduces the tools used to create levels for real-time simulations and games. Topics include level design, architecture theory, modeling for 3D engines and texturing methods. Upon completion, students should be able to design simple levels using industry standard tools.

SGD 192 Selected Topics in Simulation and Game Development 1 2 0 2
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore areas of current interest in Simulation and Game Development. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SGD 212 SGD Design II 2 3 0 3
Prerequisites: SGD 112
Corequisites: None
The course covers the advanced principles of simulation and game design. Topics include advanced design concepts in simulation and game development. Upon completion, students should be able to design an advanced simulation or game.

SGD 213 SGD Programming II 2 3 0 3
Prerequisites: SGD 113
Corequisites: None
This course covers advanced programming concepts used to create simulations and games. Emphasis is placed on acquiring advanced programming skills for use in creating simulations and games. Upon completion, students should be able to program an advanced simulation or game.

SGD 214 3D Modeling II 2 3 0 3
Prerequisites: SGD 114
Corequisites: None
This course introduces the tools used to create and animate advanced 3 dimensional models. Emphasis is placed on identifying

and utilizing the tools required to create and animate advanced 3D models. Upon completion, students should be able to create and animate advanced 3D models using 3D modeling tools.

SGD 244 3D Modeling III 2 3 0 3
Prerequisites: SGD 114
Corequisites: None
This course is designed to further a student's knowledge in creating visually compelling 3D models through the use of industry-standard software. Emphasis is placed on learning how to develop accurate textures and normal maps. Upon completion, students should be able to develop industry caliber 3D models.

SGD 271 Adv Flash Programming 2 3 0 3
Prerequisites: SGD 171
Corequisites: None
This course is designed to expand students' previous knowledge of the Flash programming environment. Emphasis is placed on learning advanced Flash techniques for use in the simulation and game industry. Upon completion, students should be able to create industry-quality simulations or games using Flash.

SGD 274 SGD Level Design II 2 0 3 3
Prerequisites: SGD 174
Corequisites: None
This course introduces the advanced tools used to create levels for real-time simulations and games. Topics include advanced level design and architecture theory, concepts related to "critical path" and "flow," game balancing, playtesting and storytelling. Upon completion, students should be able to design complex levels using industry standard tools.

SGD 285 SG Software Engineering 2 0 3 3
Prerequisites: Take One: SGD 212, SGD 213, or SGD 214
Corequisites: None
This course introduces object oriented software engineering concepts related to simulation and game development. Topics include systematic approaches to the development, operation and maintenance of simulations and games. Upon completion, students should be able to apply software engineering techniques to the development of simulations and games.

SGD 289 SGD Project 2 3 0 3
Prerequisites: Take One: SGD 212, SGD 213, SGD 214 or SGD 285, SDG 163, and SGD 164
Corequisites: None
This course provides students with the opportunity to create a functional simulation or game with minimal instructor support. Emphasis is placed upon verbal and written communication, skill documentation, professional presentation and user training. Upon completion, students should be able to create and professionally present a fully functional simulation or game.

SGD 292 Selected Topics in SGD Portfolio Creation 1 2 0 2
Prerequisites: None
Corequisites: SGD 289
This course provides an opportunity to explore areas of current interest in Simulation and Game Development. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SGD 293 Selected Topics in Maya For 3DS Max Users 2 2 0 3
Prerequisites: SGD 114
Corequisites: None
This course provides an opportunity to explore areas of current interest in Simulation and Game Development. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SCIENTIFIC GRAPHICS (SGR Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
SGR 110	**Scientific Graphics**	2	0	0	3

Prerequisites: None
Corequisites: None
This course introduces software packages used for graphing, drawing, image manipulation, data visualization, and 3D modeling. Emphasis is placed on solving design problems through appropriate visual communications techniques and on using the packages in combination to produce final documents. Upon completion, students should be able to prepare informal graphics and images and create rendered three-dimensional models.

SOCIOLOGY (SOC Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
SOC 210	**Introduction to Sociology**	3	0	0	3

Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals,

groups, and societies. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*
This course is also available through the Virtual Learning Community (VLC).

SOC 213 Sociology of the Family 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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 that influence its development and change. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*
This course is also available through the Virtual Learning Community (VLC).

SOC 220 Social Problems 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

SOC 225 Social Diversity 3 0 0 3
Prerequisites: ENG 090, RED 090, or placement
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

SOC 230 Race and Ethnic Relations 3 0 0 3
Prerequisites: RED 090 and ENG 090
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.*

SOC 242 Sociology of Deviance 3 0 0 3
Prerequisites: ENG 090 and RED 090
Corequisites: None
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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement*

SOC 252 Sociology of Work 3 0 0 3
Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: None
This course provides an understanding of the work experience in terms of rewards, satisfaction, exploitation, alienation, and institutional function and structure. Topics include an examination of industrial, professional, office, and executive work settings in relation to technology, management, and career opportunities. Upon completion, students should be able to understand work in its changing roles, institutions, and economic impact. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

SPANISH (SPA Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
SPA 111	**Elementary Spanish I**	3	0	0	3

Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: SPA 181
This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).*

SPA 112 Elementary Spanish II 3 0 0 3
Prerequisites: A grade of "C" or better in SPA 111
Corequisites: SPA 182
This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context.

Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness.

SPA 120 Spanish for the Workplace 3 0 0 3
Prerequisites: ENG 090 and RED 090, or ENG 110 or ENG 111
Corequisites: None
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. Emphasis will be on cultural awareness and cultural context issues.

SPA 161 Cultural Immersion 2 3 0 3
Prerequisites: SPA 111
Corequisites: None
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.

SPA 181 Spanish Lab 1 0 2 0 1
Prerequisites: ENG 090 and RED 090, or ENG 111
Corequisites: SPA 111
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

SPA 182 Spanish Lab 2 0 2 0 1
Prerequisites: A grade of "C" or better in SPA 181
Corequisites: SPA 112
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate cultural awareness.

SPA 211 Intermediate Spanish I 3 0 0 3
Prerequisites: A grade of "C" or better in SPA 112
Corequisites: SPA 281
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.

SPA 212 Intermediate Spanish II 3 0 0 3
Prerequisites: SPA 211
Corequisites: SPA 282
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.

SPA 221 Spanish Conversation 3 0 0 3
Prerequisites: SPA 212
Corequisites: None
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.

SPA 281 Spanish Lab 3 0 2 0 1
Prerequisites: A grade of "C" or better in SPA 182
Corequisites: SPA 211
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.

SPA 282 Spanish Lab 4 0 2 0 1
Prerequisites: SPA 281
Corequisites: SPA 212
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.

SURVEYING (SUR Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
SRV 110	**Surveying I**	2	6	0	4

Prerequisites: Take One: MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: None
This course introduces the theory and practice of plane surveying. Topics include measuring distances and angles, differential and profile leveling, compass applications, topography, and mapping. Upon completion, students should be able to use/care for surveying instruments, demonstrate field note techniques, and apply the theory and practice of plane surveying.

SRV 111	**Surveying II**	2	6	0	4

Prerequisites: SRV 110
Corequisites: None
This course introduces route surveying and roadway planning and layout. Topics include simple, compound, reverse, spiral, and vertical curves; geometric design and layout; planning of cross-section and grade line; drainage; earthwork calculations; and mass diagrams. Upon completion, students should be able to calculate and lay out highway curves; prepare roadway plans, profiles, and sections; and perform slope staking.

SRV 112	**Landscape Architectural Surveying**	2	6	0	4

Prerequisites: MAT 121
Corequisites: None
This course covers surveying techniques commonly used by landscape architects and contractors. Topics include boundary and topographic surveying. Upon completion students should be able to create boundary and topo maps and layout construction projects both on paper and in the field.

SRV 210	**Surveying III**	2	6	0	4

Prerequisites: SRV 110 and CIV 125 or SRV 293
Corequisites: None
This course introduces boundary surveying, land partitioning, and calculations of areas. Topics include advanced traverses and adjustments, preparation of survey documents, and other related topics. Upon completion, students should be able to research, survey, and map a boundary.

SRV 211	**Introduction to Hydrology**	2	2	0	3

Prerequisites: MAT 121
Corequisites: None
This course introduces the basic engineering principles and characteristics of hydrology. Topics include stormwater runoff, pipes, open channel flow and erosion control methods. Upon completion, students should be able to analyze and size gravitational drainage structures.

SRV 220	**Surveying Law**	2	2	0	3

Prerequisites: SRV 110
Corequisites: None
This course introduces the law as related to the practice of surveying. Topics include surveyors' responsibilities, deed descriptions, title searches, eminent domain, easements, weight of evidence, riparian rights, and other related topics. Upon completion, students should be able to identify and apply the basic legal aspects associated with the practice of land surveying.

SRV 230	**Subdivision Planning**	1	6	0	3

Prerequisites: SRV 111, SRV 210, and CIV 211 and CIV 125 or SRV 293
Corequisites: None
This course covers the planning aspects of residential subdivisions from analysis of owner and municipal requirements to plat layout and design. Topics include municipal codes, lot sizing, roads, incidental drainage, esthetic considerations, and other related topics. Upon completion, students should be able to prepare a set of subdivision plans.

SRV 240	**Topo/Site Surveying**	2	6	0	4

Prerequisites: SRV 110 and CIV 125 or SRV 293
Corequisites: None
This course covers topographic, site, and construction surveying. Topics include topographic mapping, earthwork, site planning, construction staking, and other related topics. Upon completion, students should be able to prepare topographic maps and site plans and locate and stake out construction projects.

SRV 260	**Field and Office Practices**	1	3	0	2

Prerequisites: Completion of three semesters of the Surveying Technology program
Corequisites: None
This course covers surveying project management, estimating, and responsibilities of surveying personnel. Topics include record-keeping, starting and operating a surveying business, contracts, regulations, taxes, personnel management, and professional ethics. Upon completion, students should be able to understand the requirements of operating a professional land surveying business.

SRV 293	**Selected Topic: Carlson Software**	1	6	0	3

Prerequisites: DFT 110 or ARC 114
Corequisites: None
This course introduces civil/surveying computer-aided drafting (CAD) software. Topics include drawing, editing, and dimensioning commands; plotting; and other related civil/surveying topics. Upon completion, students should be able to produce civil/surveying drawings using CAD software. This course is an introduction to Carlson Software.

SUSTAINABILITY TECHNOLOGY (SST Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
SST	**110**	**Intro to Sustainability**	3	0	0	3

Prerequisites: None
Corequisites: None
This course introduces sustainability issues and individual contributions toward environmental sustainability. Topics include management processes needed to maximize renewable/non-renewable energy resources, economics of sustainability, and reduction of environmental impacts. Upon completion, students should be able to discuss sustainability practices and demonstrate an understanding of their effectiveness and impacts.

SURGICAL TECHNOLOGY (SUR Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
SUR	**110**	**Introduction to Surgical Technology**	3	0	0	3

Prerequisites: None
Corequisites: SUR 111
This course provides a comprehensive study of the operative environment, professional roles, moral/legal/ethical responsi-bilities, and medical communications used in surgical technology. Topics include historical development, professional behaviors, medical terminology, interdepartmental/peer/relationships, operating room environment/safety, pharmacology, anesthesia, incision sites, and physiology of wound healing. Upon comple-tion, student should be able to apply theoretical knowledge of the course topics to the operative environment.

SUR	**111**	**Perioperative Patient Care**	5	6	0	7

Prerequisites: None
Corequisites: SUR 110
This course provides theoretical knowledge for the application of essential operative skills during the perioperative phase. Topics include surgical asepsis, sterilization/disinfection, and perioperative patient care. Upon completion, students should be able to demonstrate the principles and practices of aseptic technique, sterile attire, basic case preparation, and other relevant skills.

SUR	**122**	**Surgical Procedures I**	5	3	0	6

Prerequisites: SUR 110, SUR 111
Corequisites: SUR 123
This course introduces a comprehensive study of surgical procedures in the following specialties: general, gastrointestinal, obstetrical/gynecology, urology, otorhinolaryngology, and plastics/reconstructive. Emphasis is placed on related surgical anatomy, pathology, and procedures thereby enhancing 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.

SUR	**123**	**Clinical Practice I**	0	0	21	7

Prerequisites SUR 110, SUR 111
Corequisites: SUR 122
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.

SUR	**134**	**Surgical Procedures II**	5	0	0	5

Prerequisites: SUR 123
Corequisites: None
This course introduces orthopedic, neurosurgical, peripheral vascular, thoracic, cardiovascular, and ophthalmology surgical specialties. Emphasis is placed on related surgical anatomy, pathology, and procedures thereby enhancing 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.

SUR	**135**	**Clinical Practice II**	0	0	12	4

Prerequisites: SUR 123
Corequisites: SUR 134, SUR 137
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.

SUR	**137**	**Professional Success Preparation**	1	0	0	1

Prerequisites: SUR 123
Corequisites: SUR 134, SUR 135
This course provides job-seeking skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, and interviewing techniques. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.

SOCIAL WORK (SWK Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
SWK	**110**	**Introduction to Social Work**	3	0	0	3

Prerequisites: None
Corequisites: None
This course examines the historical development, values, orientation, and professional standards of social work and focuses on the terminology and broader systems of social welfare. Emphasis is placed on the various fields of practice including those agencies whose primary function is financial assistance, corrections, mental health, and protective services. Upon completion, students should be able to demonstrate an understanding of the knowledge, values, and skills of the social work professional.

SWK	**113**	**Working with Diversity**	3	0	0	3

Prerequisites: None
Corequisites: None
This course examines and promotes understanding, sensitivity, awareness, and knowledge of human diversity. Emphasis is placed on professional responsibilities, duties, and skills critical to multicultural human services practice. Upon completion, students should be able to integrate and expand knowledge, skills, and cultural awareness relevant to diverse populations.

TELECOMMUNICATIONS AND NETWORK ENGINEERING TECHNOLOGY (TNE Prefix)

			Class	Lab	Clin/ WExp	Credit Hours
TNE	**111**	**Campus Networks I**	2	3	0	3

Prerequisites: None
Corequisites: None
This course is designed to introduce the fundamentals of data/computer networks. Topics include an overview of data communication standards, protocols, equipment, and how they are integrating into network topologies and systems. Upon completion, students should be able to demonstrate an understanding of telecommunication and networking.

TNE	**121**	**Campus Networks II**	2	3	0	3

Prerequisites: TNE 111
Corequisites: None
This course covers the operating systems and topologies associated with networking. Topics include the various operating systems used in networking and the topologies explained on a network to network level. Upon completion, students should be able to use and explain operating systems and topologies. This course covers LANs, TCP/IP, switches, and routers.

TNE	**193**	**Selected Topics in Telecommunications and Networking**	-	-	-	3

Prerequisites: Varies, based on topic
Corequisites: None
This course provides an opportunity to explore areas of current interest in Telecommunications and Network Engineering Technology. Emphasis is placed on subject matter appropriate to telecommunications and networking. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

TNE	**231**	**Data Communications over WAN**	2	3	0	3

Prerequisites: TNE 111, TNE 121
Corequisites: None
This course is designed to introduce wide area networking. Topics include LAN-to-LAN, LAN-to-host, LAN-to-WAN connectivity, X.25 protocol, packet switching networks, and network topologies explained on a WAN basis. Upon completion, students should be able to demonstrate an understanding of wide area networking. Emphasis will be placed on understanding LAN-to-WAN interfaces.

TNE	**242**	**Data Network Design**	2	3	0	3

Prerequisites: TNE 235
Corequisites: None
This course covers the principles of the design of LAN and WAN hierarchy through the terminal. Topics include OSI model, static and dynamic addressing, network terminal management, bandwidth requirements, Internet requirements, redundancy, and broadband versus baseband systems. Upon completion, students should be able to design a hierarchical network system to board design. Emphasis will be placed on prior knowledge on LAN/WAN interfaces and components.

TNE	**245**	**Network Perimeter Security**	*2*	*3*	-	*3*

Prerequisites: TNE 121
Corequisites: None
This course introduces a variety of ways to implement security into network designs and upgrades. Topics include securing the network through the use of access lists, routers, firewalls, Ipchains, and stateful packet filtering. Upon completion, students should be able to demonstrate a variety of techniques to harden the network from outside threats. This course covers security protocols and IPSec, VPNs, and firewall routers.

TNE	**250**	**Telecommunication Networks**	2	3	0	3

Prerequisites: None
Corequisites: None
This course introduces the principal elements and theory (both analog and digital) of telecommunication networking systems. Topics include system network overview, subscriber loops, network testing and measurement, wiring, network transmission techniques synchronization and analysis, switching and signaling, and related applications. Upon completion, students should be able to demonstrate knowledge of the concepts associated with telecommunication network systems. Emphasis will be placed on voice and data communication integration. This course covers the current public switch telephone system, SONET, and SS7.

TNE 251 Advanced Telecommunication Networks 2 3 0 3
Prerequisites: TNE 250
Corequisites: None
This course is a continuation of TNE 250 and introduces advanced concepts associated with telecommunication network systems. Topics include waveform coding, emerging transmission techniques and analysis, advanced switching system architectures, personal communication systems, and related topics and applications. Upon completion, students should be able to demonstrate knowledge of the concepts associated with advanced telecommunication network systems. This course covers voice-over-IP and cell phones.

TNE 261 Internet Development 2 3 0 3
Prerequisites: TNE 111, TNE 121
Corequisites: None
This course is designed to introduce Internet concepts. Topics include Internet layer operation, IP routing and addresses and operations. TCP-IP operations and ports, firewalls, gateways, e-mail, and web-site development. Upon completion, students should be able to demonstrate an understanding of the course concepts. This course covers HTML and TCP/IP application protocols.

WEB TECHNOLOGIES (WEB Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
WEB 110	**Internet/ Web Fundamentals**	2	2	0	3

Prerequisites: Red 090
Corequisites: None
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, email, listservers, and other related topics. Upon completion, students should be able to deploy a website created with basic markup language, retrieve/decompress files, email, FTP, and utilize other internet tools. Topics include HTML and XHMTL.

WEB 111 Intro to Web Graphics 2 2 0 3
Prerequisites: None
Corequisites: None
This course introduces the creation of web graphics, and addressing problems peculiar to WWW display using appropriate software. Topics include web graphics file types, optimization, RGB color, web typography, elementary special effects, transparency, animation, slicing, basic photo manipulation, and other related topics. Upon completion, students should be able to create graphics, such as animated banners, buttons, backgrounds, logos, and manipulate photographic images for Web delivery.

WEB 115 Web Markup and Scripting 2 2 0 3
Prerequisites: WEB 110 or CIS 172 or CIS 115 or CSC 151
Corequisites: None
This course introduces Worldwide Web Consortium (W3C) standard client-side Internet programming using industry-established practices. Topics include JavaScript, markup elements, stylesheets, validation, accessibility, standards, and browsers. Upon completion, students should be able to develop hand-coded web pages using current markup standards.

WEB 120 Intro Internet Multimedia 2 2 0 3
Prerequisites: WEB 111
Corequisites: None
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.

WEB 125 Mobile Web Design 2 2 0 3
Prerequisites: WEB 110
Corequisites: None
This course introduces students to web design for mobile devices. Topics include planning an effective mobile Web site, industry standard Mobile Markup Language, CSS3, multimedia, m-commerce, social media, testing and publishing. Upon completion, students should be able to plan, develop, test, and publish Web content designed for mobile devices.

WEB 140 Web Development Tools 2 2 0 3
Prerequisites: RED 090, MAT 060 or ENG111, MAT 060
Corequisites: None
This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets.

WEB 141 Mobile Interface Design 2 2 0 3
Prerequisites: RED 090, MAT 060
Corequisites: None
This course covers current design standards and emerging approaches related to the design and development of user interfaces for mobile devices. Emphasis is placed on research and evaluation of standard and emerging practices for effective interface and user experience design. Upon completion, students should be able to design effective and usable interfaces for mobile devices.

WEB 151 Mobile Application Dev 1 2 2 0 3
Prerequisites: WEB 187 or CSC 151
Corequisites: None
This course introduces students to programming technologies, design and development related to mobile applications. Topics include accessing device capabilities, industry standards, operating systems, and programming for mobile applications using an OS Software Development Kit (SDK). Upon completion, students should be able to create basic applications for mobile devices.

WEB 180 Active Server Pages 2 2 0 3
Prerequisites: CIS 115 or WEB 115 or CSC 160
Corequisites: None
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. Current trends in ASP, to include ASP.Net will be taught.

WEB 182 PHP Programming 2 2 0 3
Prerequisites: CIS 115
Corequisites: None
This course introduces students to the server-side, HTML-embedded scripting language PHP. Emphasis is placed on programming techniques required to create dynamic web pages using PHP scripting language features. Upon completion, students should be able to design, code, test, debug, and create a dynamic web site using the PHP scripting language.

WEB 183 Perl Programming 2 2 0 3
Prerequisites: WEB 115 or CIS 115 or CSC 160
Corequisites: None
This course introduces students to the Perl Programming language. Topics include programming techniques using CGI script, input/output operations, sequence, iteration, selection, arithmetic operations, subroutines, modules, integrating database, pattern matching and other related topics. Upon completion, students should be able to design, code, test, and debug Perl language programs.

WEB 185 ColdFusion Programming 2 2 0 3
Prerequisites: CIS 115
Corequisites: None
This course introduces ColdFusion Programming. Topics include installing a ColdFusion development environment, using CFQUERY tags to send and receive database information, creating and displaying a form, and other related topics. Upon completion, students should be able to design, code, test, and debug using a ColdFusion environment.

WEB 186 XML Technology 2 2 0 3
Prerequisites: CIS 115; and WEB 110 or CIS 172
Corequisites: None
This course is designed to introduce students to XML and related internet technologies. Topics include extendible style language (XSL) document object model (DOM), extendible stylesheet language transformation (XSLT), and simple object access protocol (SOAP). Upon completion, students should be able to create a complex XML document.

WEB 187 Wireless/Internet Programming 2 2 0 3
Prerequisites: CIS 115
Corequisites: None
This course introduces the Internet and Web development for portable wireless devices with a focus on practical business-related applications. Topics include WAP, WML, XHTML, XML, and wireless internet and mobile business practices and techniques. Upon completion, students should be able to develop and wirelessly enable websites and business applications for use on portable electronic devices.

WEB 210 Web Design 2 2 0 3
Prerequisites: WEB 140
Corequisites: None
This course introduces intermediate to advanced web design techniques. Topics include customer expectations, advanced markup language, multimedia technologies, usability and accessibility practices, and techniques for the evaluation of web design. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional web sites.
This course is also available through the Virtual Learning Community (VLC).

WEB 211 Advanced Web Graphics 2 2 0 3
Prerequisites: WEB 111
Corequisites: None
This course covers the advanced concepts related to the creation and manipulation of graphic images for web delivery. Topics include graphics acquisition, use of masks and channels, advanced special effects, advanced photo manipulation, and other related topics. Upon completion, students should be able to create, manipulate, and optimize web graphics with advanced techniques and maintain an online coursework portfolio.

WEB 215 Advanced Markup and Scripting 2 2 0 3
Prerequisites: WEB 115
Corequisites: None
This course covers advanced programming skills required to design Internet applications. Emphasis is placed on programming techniques required to support network applications. Upon completion, students should be able to design, code, debug, and document internet-based programming solutions to various real-world problems using an appropriate programming language.

WEB 220 Advanced Multimedia 2 2 0 3
Prerequisites: WEB 120 or ITN 120
Corequisites: None
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.

WEB 225 Content Management Sys 2 2 0 3
Prerequisites: WEB 110
Corequisites: None
This course introduces students to Content Management Systems (CMS) designed for the publication of Web content to Web sites. Topics include individual user accounts, administration menus, RSS-feeds, customizable layout, flexible account privileges, logging, blogging systems, creating online forums, and modules. Upon completion, students should be able to register and maintain individual user accounts and create a business website and/or an interactive community website.

WEB 230 Implementing Web Servers 2 2 0 3
Prerequisites: NET 110 or NET 125
Corequisites: None
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.

WEB 250 Database Driven Websites 2 2 0 3
Prerequisites: DBA 110 and WEB 140
Corequisites: None
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.

WEB 251 Mobile Application Dev II 2 2 0 3
Prerequisites: WEB 151
Corequisites: None
This course covers advanced applications and custom programming to develop applications for mobile devices. Topics include device capabilities, OS specific Software Development Kits (SDK), scripting for functionality and designing interactivity. Upon completion, students should be able to demonstrate effective programming techniques to develop advanced mobile applications.

WEB 260 E-Commerce Infrastructure 2 2 0 3
Prerequisites: WEB 250; and WEB 180 or ITN 120
Corequisites: None
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.

WEB 285 Emerging Web Technologies 2 2 0 3
Prerequisites: None
Corequisites: None
This course will explore, discuss, and research emerging technologies in the web arena. Emphasis is placed on exposure to up-and-coming technologies relating to the web, providing hands-on experience, and discussion of practical implications of these emerging fields. Upon completion, students should be able to articulate issues relating to these technologies.

WEB 287 Web E-Portfolio 1 2 0 2
Prerequisites: WEB 210
Corequisites: None
This course covers the creation and organization of a web-based e-portfolio that includes a resume, references, and comprehensive academic and work samples. Emphasis is placed on creating an e-portfolio with solid design and demonstrable content, the production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to present their own domain with included professional e-portfolio elements of resume, sample work, and related self-promotional materials.

WEB 289 Internet Technologies Project 1 4 0 3
Prerequisites: WEB 230 and WEB 250
Corequisites: None
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.

WEB 298A Seminar in Web Technology 2 2 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

WELDING (WLD Prefix)

		Class	Lab	Clin/ WExp	Credit Hours
WLD 110	**Cutting Processes**	1	3	0	2

Prerequisites: None
Corequisites: None
This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.

WLD 112	**Basic Welding Processes**	1	3	0	2

Prerequisites: None
Corequisites: None
This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.

WLD 115	**SMAW (Stick) Plate**	2	9	0	5

Prerequisites: None
Corequisites: None
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.

WLD 116	**SMAW (Stick) Plate/Pipe**	1	9	0	4

Prerequisites: WLD 115
Corequisites: None
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.

WLD 121	**GMAW (MIG) FCAW/Plate**	2	6	0	4

Prerequisites: None
Corequisites: None
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.

WLD 131	**GTAW (TIG) Plate**	2	6	0	4

Prerequisites: None
Corequisites: None
This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.

WLD 132	**GTAW (TIG) Plate/Pipe**	1	6	0	3

Prerequisites: WLD 131
Corequisites: None
This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry. Orbital welding fundamentals will be introduced during this course.

WLD 141	**Symbols and Specifications**	2	2	0	3

Prerequisites: None
Corequisites: None
This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.

WLD 151	**Fabrication I**	2	6	0	4

Prerequisites: None
Corequisites: None
This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, cutting, joining techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.

WLD 261	**Certification Practices**	1	3	0	2

Prerequisites: WLD 115, WLD 121, WLD 131
Corequisites: None
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.

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Each community college in North Carolina is governed by a volunteer board of trustees, with specific duties defined by state law. Among their responsibilities, trustees establish policies for the college to follow and approve the college's budget each year and serve as advocates for the college. When there is a vacancy in the college's presidency, the trustees are responsible for choosing a new president.

Wake Tech is served by 12 appointed trustees. Four are appointed by the Governor of North Carolina, four are appointed by the Wake County Commissioners and four are appointed by the Wake County Board of Education. These trustees are appointed to four-year terms of office, and the appointments are staggered so that the board always has a blend of experienced and new trustees.

In addition to the 12 appointed trustees, the college's Student Government Association president serves as an ex-officio member of the Wake Tech Board of Trustees. The SGA president is encouraged to share ideas and concerns with the board but does not vote on board issues.

The college president serves as secretary to the Wake Tech Board of Trustees but is not considered a member of the board.

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Austin, Gail R., M.S. ..... *Instructor, Early Childhood Education*

Austin, Sue, B.S. ..... *Instructor, Pre-Curriculum Mathematics*

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McMillian, Sharon W., M.S ..... *Instructor/Department Head, Individualized Learning Center*

Meardon, Susan L., M.S ..... *Instructor/Department Head, Pre-Engineering*

Mims, Lonette E., B.A ..... *Director, Correction Education*

Mizelle, Angela J., B.S ..... *Department Head, Correction & Detention Training, Public Safety & Homeland Security*

Montague, Paula Y., B.A ..... *Director of ABE/GED/ESL*

Moose, Lee R., M.Div. ..... *Director, Immured & Special Populations*

CREDENTIALS DIRECTORY

Morabito, Nancy F., B.A ..... *Director, Compensatory Education*

Neagle, Rebecca, M.A ..... *Associate Department Head, English*

Osborne, Diana G., B.A.S ..... *Department Head, Distance Education*

Overington, Ellen H., M.A ..... *Director of Resource Center*

Parker, Charmaine, L.P.N., A.G.E ..... *Instructor/Department Head, Medical Assisting*

Payne, Susan B., M.A. ..... *Dean, Basic Skills Division*

Pearson, Anita M., M.A. ..... *Director of Adult High School & Student Services*

Phinazee, Karen Beatty, M.A. ..... *Dean of Student Services, Northern Wake Campus*

Randall, Gary R., A.A.SL, N.C. Electrical Contractors License ..... *Instructor/Department Head, Electrical/Electronics Technology*

Richman, Lisa M., M.S ..... *Director, Mobile Lab Operations*

Roberson, James A., M.L.S ..... *Academic Dean, Western Wake Campus*

Roberton, Margaret R., M.B.A ..... *Dean, Continuing Education Registration & Records*

Rosen, Paula S., M.S ..... *Instructor/Department Head, Office Administration*

Routt, William A., M.S ..... *Department Head/Instructor, Electronics Engineering Technology*

Schilz, Baerbel Schilz, M.A. ..... *Director, Assessment/Retention and Training*

Shurtleff, Martha A., R.N., M.S ..... *Instructor/Department Head, Surgical Technology*

Slaughter, Janie J., M.A. ..... *Instructor/Department Head, Criminal Justice*

Street, Barry, M.S. ..... *Athletic Director*

Stewart, Walter W., A.A.S ..... *Department Head, Basic Law Enforcement Training*

Swann , Steven D., M.A ..... *Department Head/Instructor, English as a Foreign Language*

Terrill, Marilyn E., M.A. ..... *Instructor/Associate Department Head, Business Administration*

Terrill, William L., M.Ed ..... *Director, Apprenticeship/FIT*

Thornton, Sammie C., B.A.S ..... *Dean, Applied Technologies Division*

Tims, Ray L., M.A ..... *Dean, Education Services & Technology Division*

Tucker, A. NaDene, M.Ed. ..... *Instructor/Department Head, Early Childhood Education*

Umphlett, Rebel Bradford, M.S ..... *Director, Aseptic & Lab Operations*

Underwood, David E., N.C. State Plumbing Contractor License ..... *Instructor/Department Head, Plumbing*

Wang, Kai, Ph.D ..... *Dean, Special Projects*

CREDENTIALS DIRECTORY

Wahrman¸ Russell, A.A.S ..... *Instructor/Department Head, Welding Technology*

Welker, Sharon F., M.A., M.Ed ..... *Associate Department Head/Instructor, Mathematics and Physics*

Wood, Deborah J., R.T. (R)(M) (ARRT), M.Ed ..... *Instructor/Department Head, Radiography*

Williams, Martha O., M.A ..... *Dean, Community Projects & Educational Programs*

Yarley, David H., M.S ..... *Director of BTEC Training*

Zullo, Matthew D., J.D ..... *Instructor, Department Head Information Systems*

A directory of Wake Technical Community College's staff, faculty, and contact information, can be found in the ***Searchable Online Directory*** at http://www2.waketech.edu/directory/

Wake Technical Community College Contact Information

SERVICE/LOCATION	WEB ADDRESS	PHONE
Main Campus: 9101 Fayetteville Road (401 S), Raleigh, NC 27603	http://maincampus.waketech.edu/	919-866-5000
Health Sciences Campus: 2901 Holston Lane, Raleigh, NC 27610	http://healthsciencescampus.waketech.edu/	919-747-0400
Western Wake Campus: 3434 Kildaire Farm Road, Cary, NC 27518	http://westerncampus.waketech.edu/	919-335-1000
Business & Industry Center: 3434 Kildaire Farm Road, Cary, NC 27518	http://bic.waketech.edu	919-335-1001
Northern Wake Campus: 6600 Louisburg Road Raleigh, NC 27616	http://northerncampus.waketech.edu/	919-532-5501 or 5502
Adult Education Center: 1920 Capital Boulevard, Raleigh, NC 27604	http://locations.waketech.edu/index.php?page=aec	919-334-1500
State Personnel Development Center (SPDC): 101 West Peace Street, Raleigh, NC 27603	http://www.osp.state.nc.us/train.htm	919-733-2474
Public Safety Education Campus (PSEC): 321 Chapanoke Rd, Raleigh, NC 27603	http://publicsafetycampus.waketech.edu/	919-866-6100
Eastern Wake Education Center (EWEC): 519 Industrial Drive, Zebulon, NC 27597	http://conted.waketech.edu/registration/abbreviations.php	919-866-5727
General Information	http://www.waketech.edu/	919-866-5500
Calendars/Deadlines	http://calendars.waketech.edu/	919-866-5500
Admissions	http://admissions.waketech.edu/	919-866-5000
Advising	http://advising.waketech.edu/	919-866-5000
Basic Skills (GED, Adult High School, etc.)	http://basicskills.waketech.edu/	919-866-5280 919-334-1500
Continuing Education	http://conted.waketech.edu/	919-866-5800
Curriculum Education	http://curred.waketech.edu/	919-866-5000
Distance Education	http://online.waketech.edu/	919-866-5618
Concurrent Enrollment (High School & College dual enrollment)	http://admissions.waketech.edu/index.php?page=procedures_high school	919-866-5425
Wake Technical Community College Foundation, Inc.	http://foundation.waketech.edu/	919-866-5924
ITS Services and Support (Helpdesk/ EagleCruiser/WebAdvisor, etc.)	http://its.waketech.edu/service.php	919-866-7000

Wake Tech- Main Campus Information

SERVICE	MAIN (401 S) CAMPUS	PHONE
Advising	Student Services, Room 121 http://advising.waketech.edu/	919-866-5474
Cashier's Office	Holding Hall, Room 111	919-866-5900
College Bookstore	Beside Student Services Bldg. http://bookstore.waketech.edu	919-771-1663 or 866-5959
Computer Labs	PLM 151 http://students.waketech.edu/computerlabs.php	919- *Additional computer resources are available at each library and ILC location)
Cooperative Education	Holding Hall, Room 108C http://coopeducation.waketech.edu/	919-866-5694
Counseling: ***Academic, Career, and Personal***	Student Services, Room 143 http://counseling.waketech.edu/	919-866-5460
Disability Support Services	Holding Hall, Room 124 http://disabilityservices.waketech.edu/	919-866-5670
Enrollment & Records Services	Student Services, Room 254 http://registration.curred.waketech.edu/	919-866-5700
Financial Aid	Student Services, Room 015 http://financialaid.waketech.edu/	919-866-5417
Individualized Learning Center (ILC) (Reading, Writing, & Math tutoring)	ILC Building http://ilc.waketech.edu/	919-866-5276
Job Placement	Holding Hall, Room 108C http://jobplacement.waketech.edu/	919-866-5695
Library	Library Education, First Floor http://library.waketech.edu/	919-866-5644
Photo I.D.	Student Services, Room 137 http://studentactivities.waketech.edu/idbadges.php	919-866-5405
Security (Emergency)	Holding Hall, Room 101A http://securityservices.waketech.edu	919-866-5911
SGA (Student Activities)	Student Services, Room 205 http://studentactivities.waketech.edu/clubs/sga	919-866-5407
Subway Restaurant	Student Services Cafeteria, Room 120K Monday-Thursday 7:00 am – 7:00 pm Friday 7:00 am - 4:00 pm Saturday & Sunday (upon request for special events)	919-771-2190
Veteran's Information	Student Services, Room 019 http://veterans.waketech.edu	919-866-5417

Wake Tech – Northern Wake Campus Information

SERVICE	NORTHERN WAKE CAMPUS	PHONE
Advising/Admissions Video phone 866-5450 SS Bldg Rm 137	Bldg. A - Room 218 (front desk)	919-532-5501
Cashier's Office	Bldg. A - Room 236	919-532-5507
College Bookstore	Bldg. B - Room 225 or online at http://bookstore.waketech.edu	919-790-9306
Counseling: Academic, Career, and Personal	Bldg. A – Room 218 (front desk)	919-532-5501
Disability Support Services:	Bldg. A – Room 218D	919-532-5505
Enrollment & Records Services	Bldg. A - Room 213	919-532-5574
Financial Aid	Bldg. A - Room 231	919-532-5504
Individualized Learning Center (Reading, Writing, Math, and Foreign Language tutoring) Student I.D. Required	Bldg. B - Room 213 http://ilc.waketech.edu/	919-532-5548
Job Placement / Co-op Office	Main Campus Holding Hall - Room 108C	919-866-5693
Library Student I.D. Required	Bldg. B - Room 239	919-532-5550
Photo I.D.	Bldg. A - Room 236	919-532-5507
Security (Emergency)	Bldg. B- Room 236	919-866-5911
SGA (Student Activities)	Bldg. D - Room 206B	919-532-5654
Veteran's Information	Main Campus SS Bldg- Room 019	919-866-5417
OPEN COMPUTER AREAS		
Northern Wake Library Student I.D. Required Computers for research only Microsoft Office available	Bldg. B - Room 239	919-532-5550
Open Lab Student I.D. Required Microsoft Office and other applications available	Bldg. B - Room 216 http://students.waketech.edu/computerlabs.php	919-532-5584 *Additional computer resources are available at each library and ILC location)
CONTINUING EDUCATION		
Registration	Bldg. D - Room 230 (Front Desk)	919-532-5502
Online Classes **www.ed2go.com/waketech**	Bldg. D - Room 323	919-532-5581

Wake Tech – Health Science Campus Information

SERVICE	HEALTH SCIENCE CAMPUS	PHONE
Advising/Admissions	Student Service Center Front Desk	919-747-0402
Cashier's Office	Health Education Bldg. – Room 128F	919-747-0010
Counseling: *Academic, Career, and Personal*	Student Service Center Front Desk	919-747-0402
Disability Support Services:	Student Service Center Monday Only	919-747-0107
Financial Aid	Student Service Center Thursday Only	919-747-0106
Individualized Learning Center (Reading, Writing, Math, and Foreign Language tutoring) Student I.D. Required	HEB 208 http://ilc.waketech.edu/	919-747-0233
Library	Health Education Bldg. Room 123	919-747-0002
Photo ID	Student Service Center Front Desk	919-747-0402
Security (Emergency)	HS 502	919-866-5911
SGA (Student Activities)	Health Sciences Bldg. HS 310, Monday Only	919-747-0106
OPEN COMPUTER AREAS		
Health Sciences Library No I.D. Required Microsoft Office Available	Health Education Bldg. Room 123	919-747-0002
Open Lab Student ID Required Microsoft Office and other applications available	Health Science Bldg. Room 514A http://students.waketech.edu/computerlabs.php	919-335-1042 *Additional computer resources are available at each library and ILC location)

Wake Tech – Western Wake Campus Information

SERVICE	WESTERN WAKE CAMPUS	PHONE
Advising/Admissions/Counseling	Abby Littlefield, Room 255	919-335-1050
Cashier's Office	Room 100A	919-335-1049
Fax	Room 100	919-335-1015
Financial Aid	Room 255	919-335-1040
Individualized Learning Center (Reading, Writing, Math, and Foreign Language tutoring) Student I.D. Required	Learning Resource Center , Suite 200 http://ilc.waketech.edu/	919-335-1028
Library	Learning Resource Center, Suite 200	919-335-1029
Open Computer Lab Student I.D. Required Microsoft Office and other applications available	Room 254 http://students.waketech.edu/computerlabs.php	919-335-1045 *Additional computer resources are available at each library and ILC location)
Photo I.D.	Room 254	919-335-1045
Security (Emergency)	(contact 1st floor receptionist)	919-866-5911
CONTINUING EDUCATION		
Registration	1st and 2nd Floor Reception Areas Suite 100 and 200	919-335-1000 919-335-1001
Business and Industry Center	Suite 200	919-335-1001

Wake Tech – Public Safety Education Campus Information

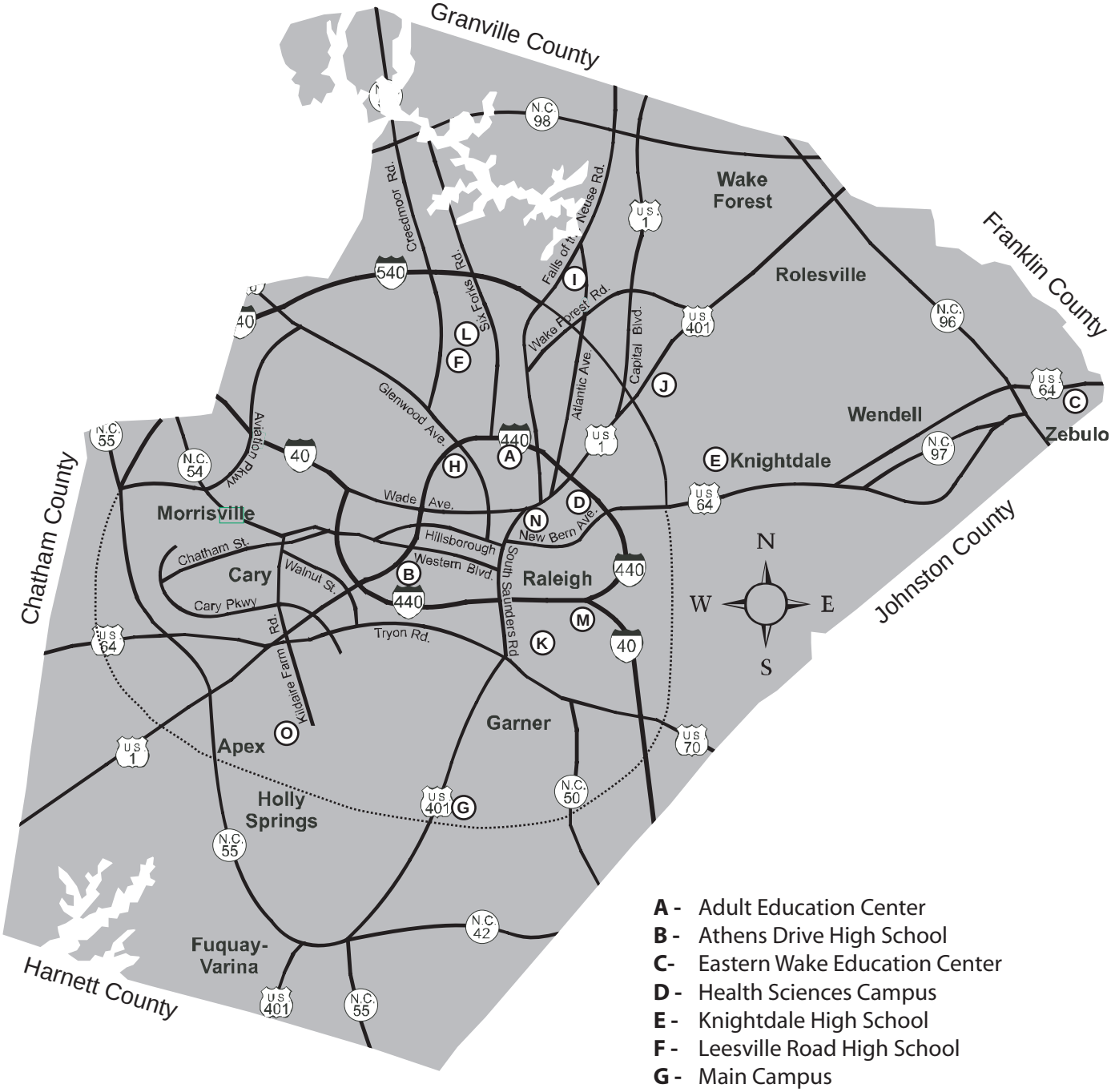
SERVICE	PUBLIC SAFETY EDUCATION CAMPUS	PHONE
Advising/Admissions:	Room 1716 M, W 8 a.m. – 5 p.m. Friday (by appt. only) 8 a.m. – 4 p.m.	919-866-5468
Cashier's Office	Room 1718 M-F, 8 a.m. – 5 p.m.	919-866-6108
Counseling *Academic, Career, and Personal*	Room 1714 Wednesday, 9 a.m. – 1:30 p.m.	919-866-6137
Disability Support Services:	Room 1714 By appointment	919-866-5670
Financial Aid	Room 1714 Monday, 1 – 3 p.m.	919-866-6137
Individualized Learning Center (Reading, Writing, Math, and Foreign Language tutoring) Student I.D. Required	Room 1611 T, W, Thur., 9 a.m. – 3 p.m.	919-866-5276
Library	Room 1615 M-F, 9 a.m. 3 p.m.	919-866-6107
Photo ID	Front Desk M-F, 8 a.m. – 4:30 p.m.	919-866-6101
Security (Emergency)	Room 1428 M-F, 8 a.m. – 5 p.m.	919-866-5911
SGA (Student Activities)	Room 1714 Thursday, 11 a.m. – 1 p.m.	919-866-6137
Veteran's Information	Main Campus SS Building, Room 015 M-F, 8 a.m. – 5 p.m.	919-866-5402

Wake Tech Locations

Wake County, NC

919-866-5000

http://locations.waketech.edu



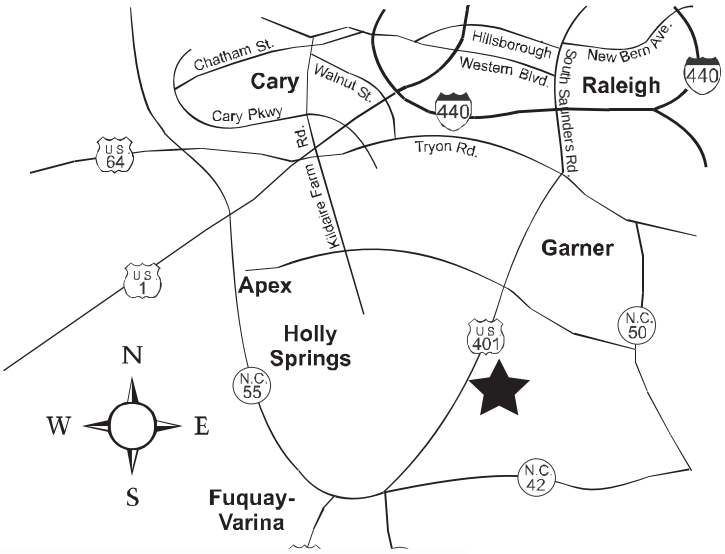
- **A -** Adult Education Center
- **B -** Athens Drive High School
- **C-** Eastern Wake Education Center
- **D -** Health Sciences Campus
- **E -** Knightdale High School
- **F -** Leesville Road High School
- **G -** Main Campus
- **H -** Martin Middle School
- **I -** Millbrook High School
- **J -** Northern Wake Campus
- **K -** Public Safety Education Campus
- **L -** Sanderson High School
- **M -** Southeast High School
- **N -** State Personnel Development Center
- **O -** Western Wake Campus

Wake Tech Main Campus

9101 Fayetteville Road, Raleigh, NC

919-866-5000

http://maincampus.waketech.edu



1. Parking and traffic rules and regulations are enforced 24 hours per day.
2. Always follow one-way traffic arrows.
3. Head-in and parallel parking only.
4. Parking permitted only in designated spaces.
5. Campus speed limit is 20 mph maximum.
6. See back for Traffic Rules and Regulations

AHT.....Automotive & Heavy Equipment Technology

BK.....Book Store & Print Shop

COS....Cosmetology & Esthetics Technology

ECPE...Early Childhood & Physical Education Building

ETB.....Engineering Technology Building

HO.....Holding Hall

ILC .....Individualized Learning Center

LE .....Library Education

MOD....Modular Swing Space

PLM.....Pucher-LeMay

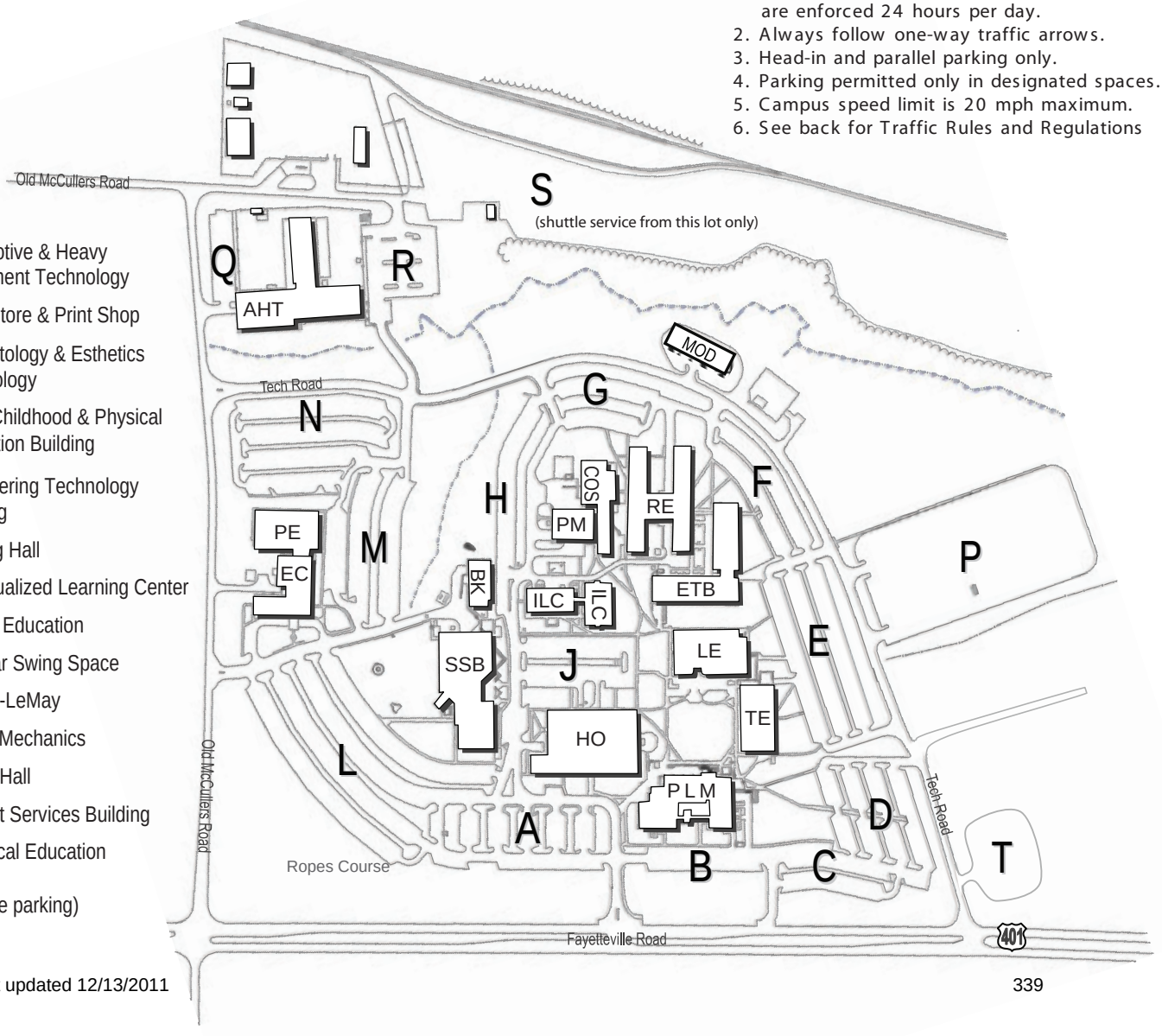
PM.....Power Mechanics

RE.....Ready Hall

SSB.....Student Services Building

TE .....Technical Education

(Letters indicate parking)

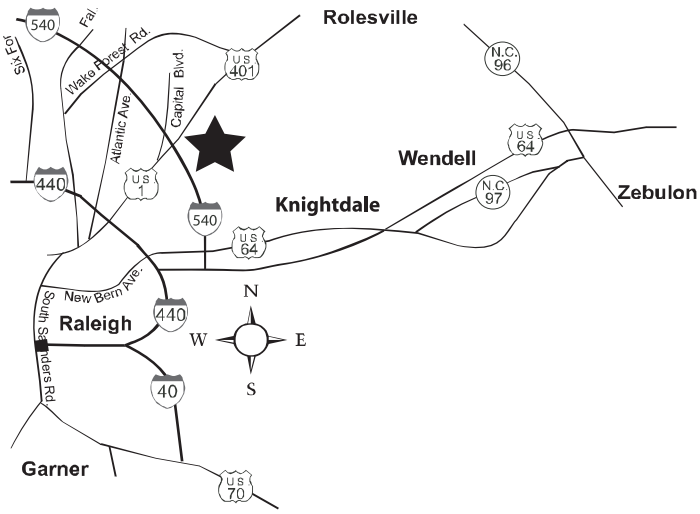


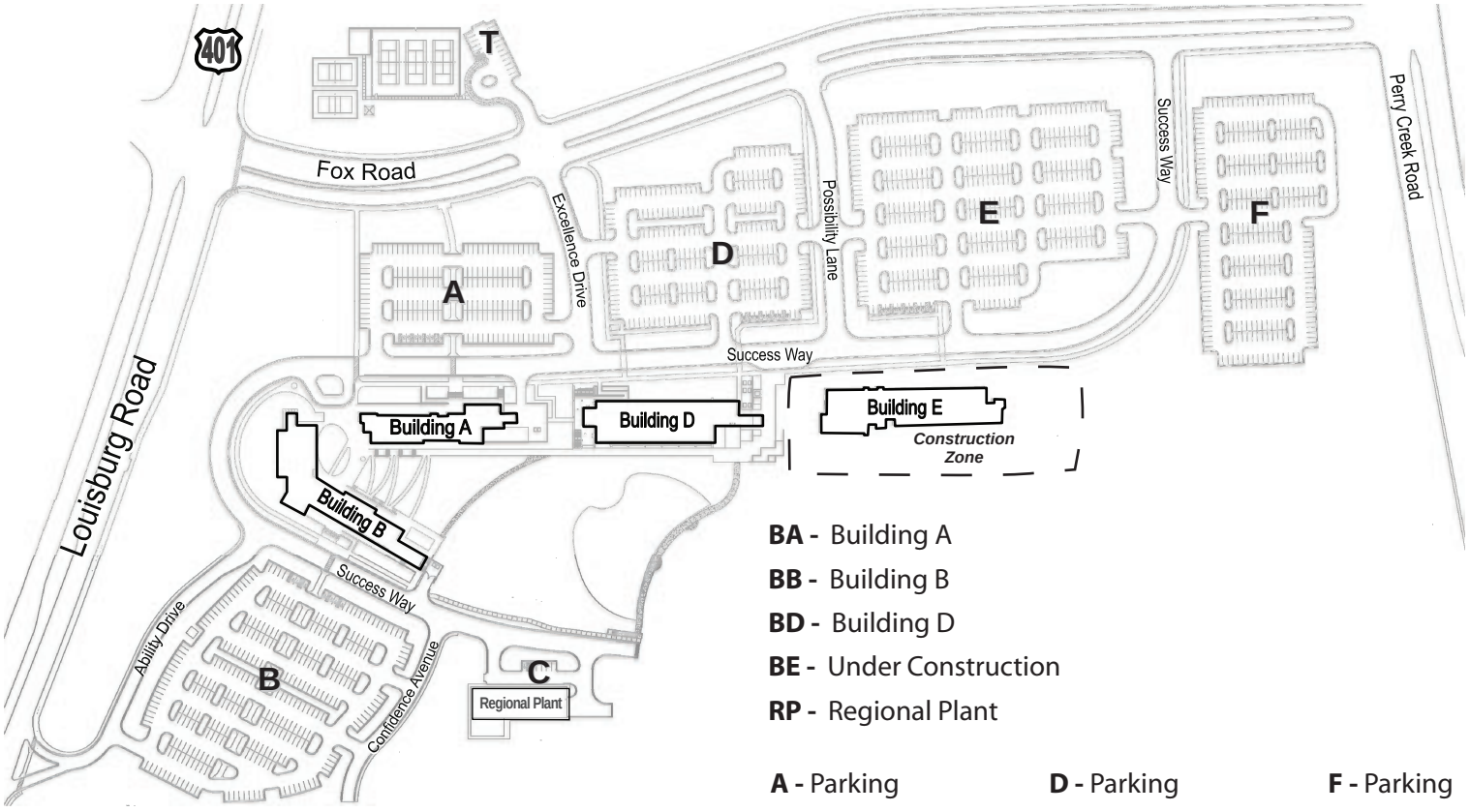
Northern Wake Campus

6600 Louisburg Road, Raleigh, NC

919-866-5000

http://northerncampus.waketech.edu





BA - Building A

BB - Building B

BD - Building D

BE - Under Construction

RP - Regional Plant

A - Parking

B - Parking

C - Facilities Parking

D - Parking

E - Parking

F - Parking

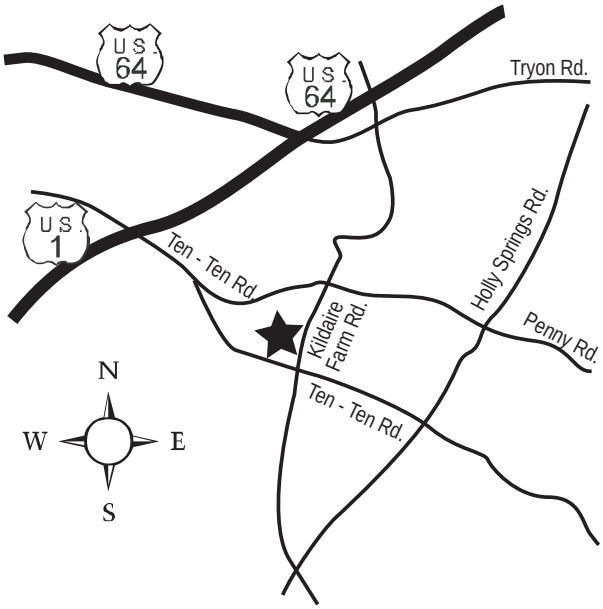
T - Parking

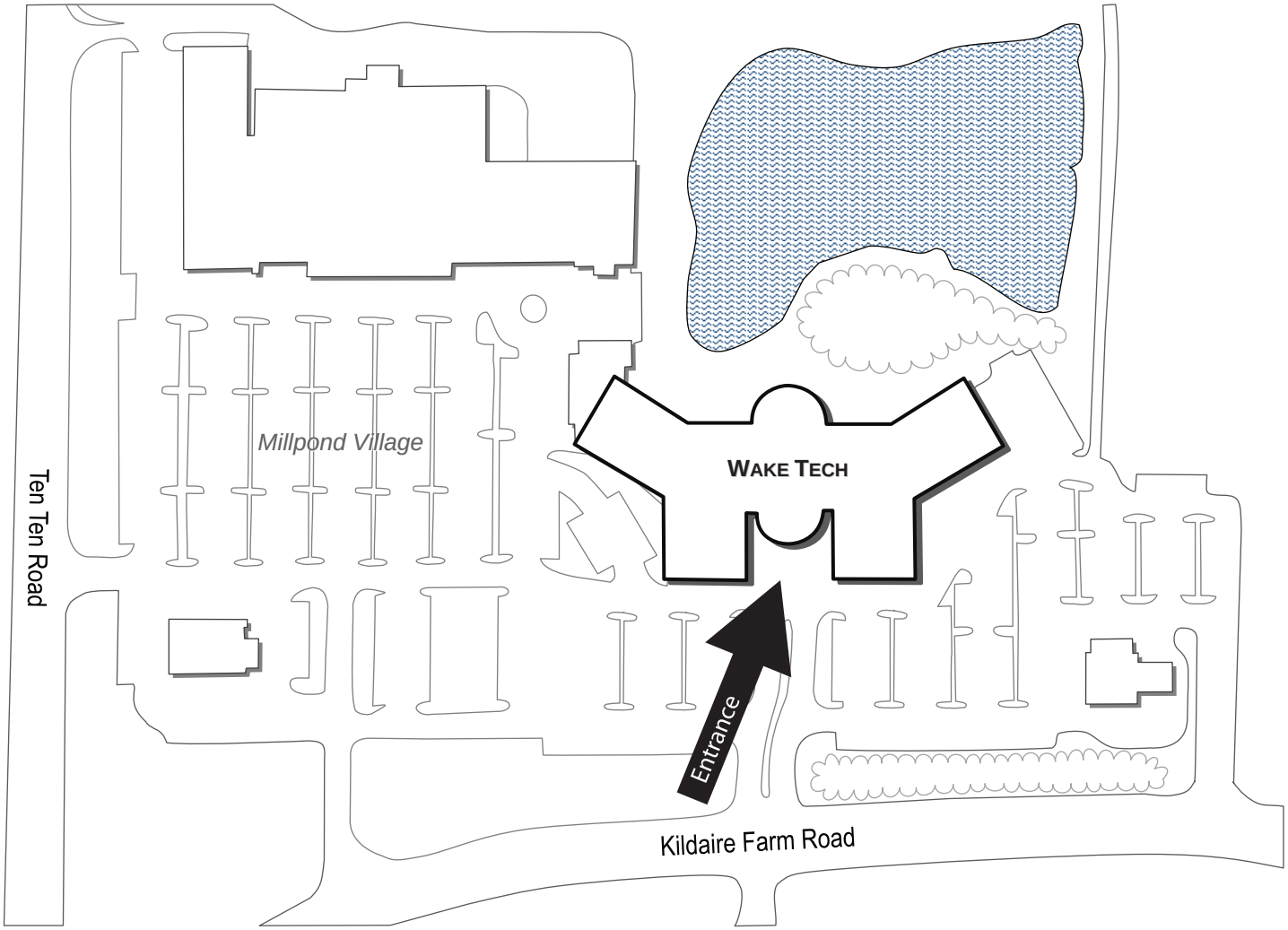
Western Wake Campus

3434 Kildaire Farm Road (Millpond Village), Cary, NC

919-335-1000

http://westerncampus.waketech.edu



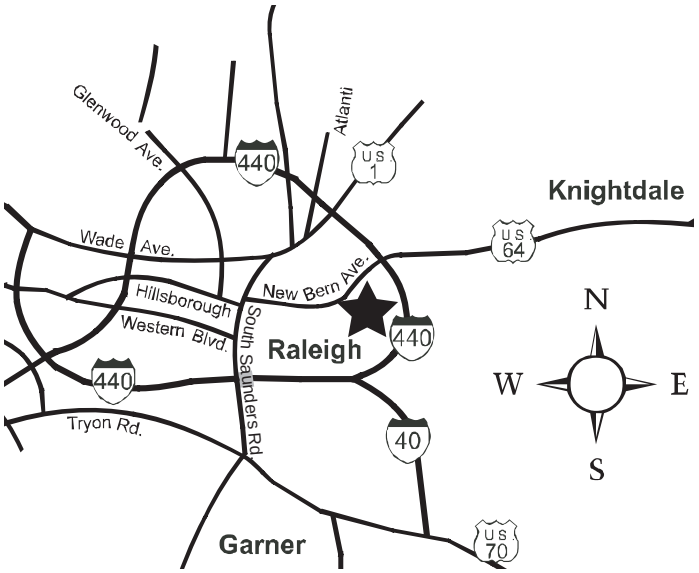


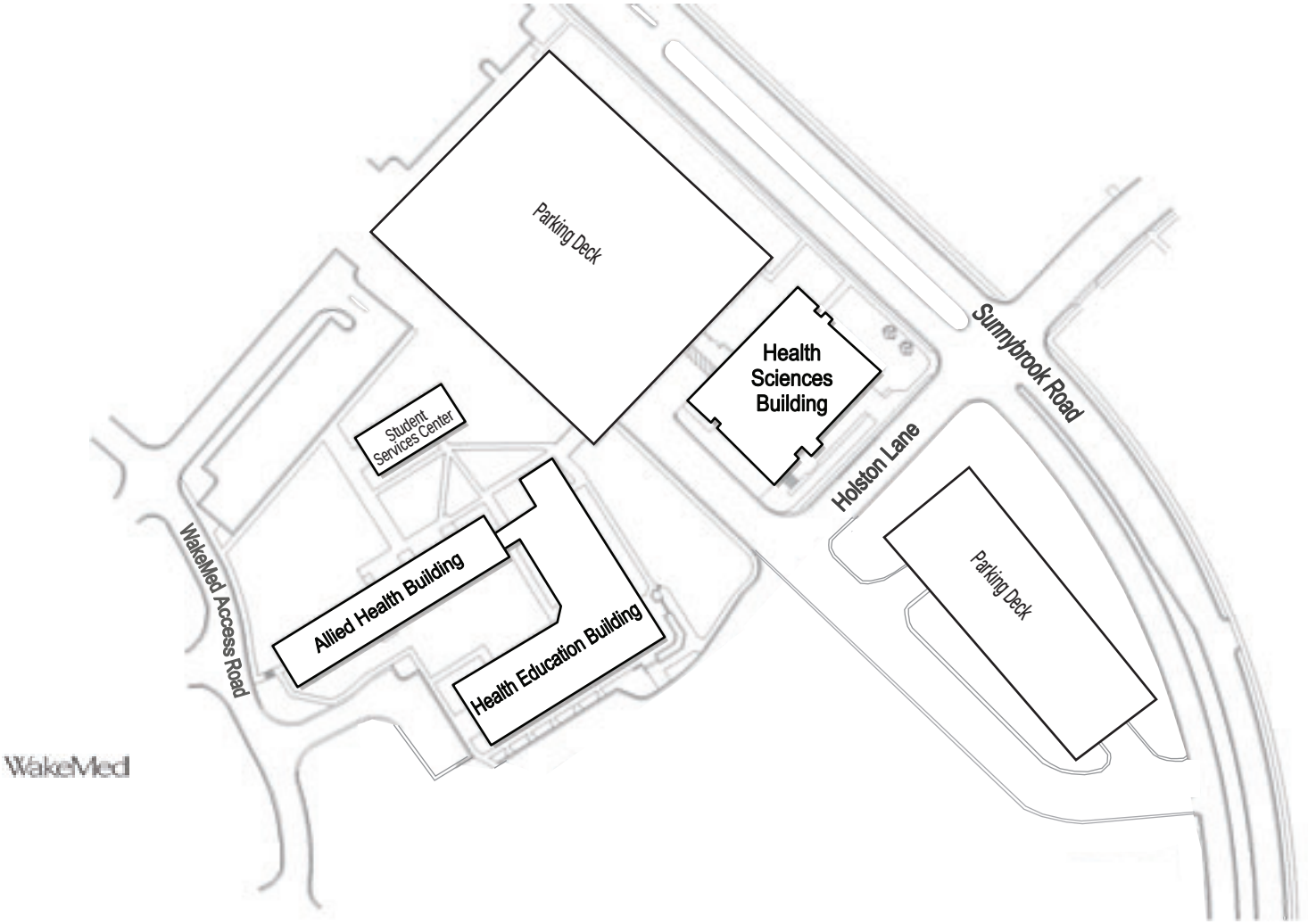
Health Sciences Campus

2901 Holston Lane, Raleigh, NC

919-747-0400

http://healthsciencescampus.waketech.edu



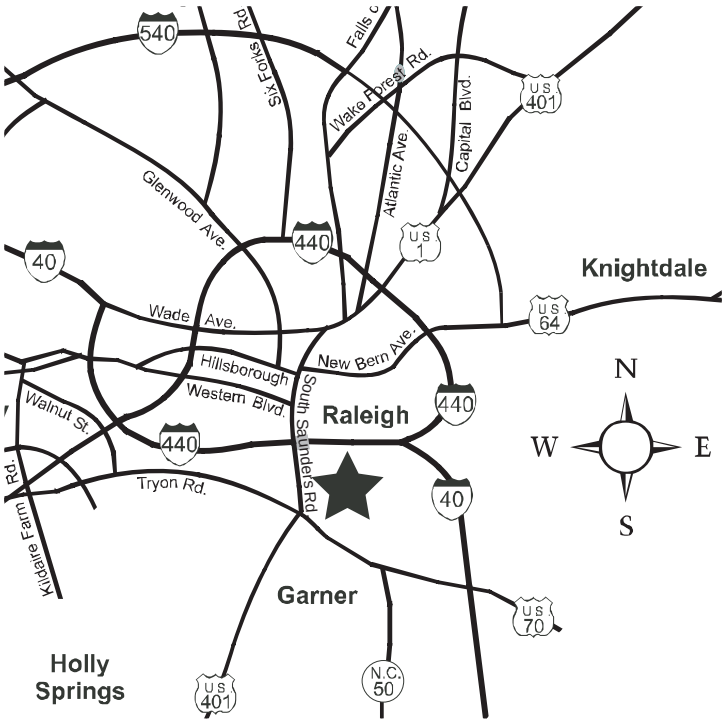


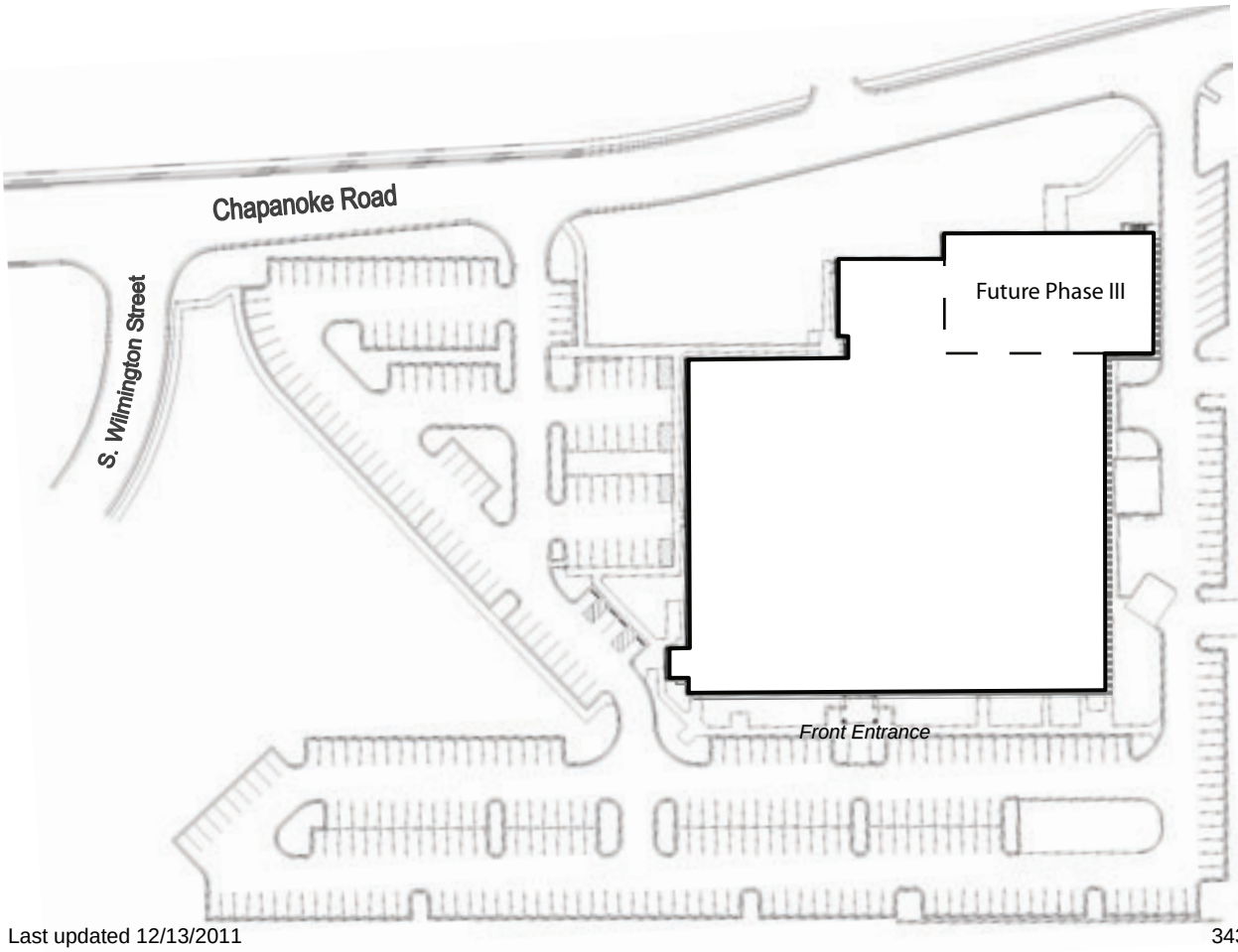
Public Safety Education Campus

321 Chapanoke Road, Raleigh, NC

919-866-6100

http://facilities.waketech.edu/campuses/pstc.php





COLLEGE CATALOG INDEX

COLLEGE CATALOG INDEX

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X,Y,Z

None at this time

Remember to check the online College Catalog for the most up-to-date information at http://catalog.waketech.edu