WAKE TECH

2014-2015 College Catalog | Volume 36

Wake Technical Community College | waketech.edu | 919-866-5000

WAKE TECH
COMMUNITY COLLEGE

ATTENTION!

This document was last updated
August 4, 2014

Please view the online catalog for the most current information at
http://catalog.waketech.edu

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

Welcome to Wake Tech!

We've prepared this catalog for you! In it you'll find the courses, academic programs, and career pathways that can help you create your future.

Our curriculum (for-credit) courses can help you earn a degree, diploma, or certificate, credentials that are vital for finding a good job and building a successful career. Your Wake Tech studies can also serve as the first steps toward additional education and credentials at a university. With our continuing education (non-credit) classes you can learn specialized skills, grow professionally, or explore creative or entrepreneurial interests.

Wake Tech has provided high-quality education and training for the Wake County region for half a century! Our top-notch instruction and hands-on learning experiences prepare students and workers at every level to meet the challenges of the future. We focus on innovative approaches while we maintain the standard of excellence that has always been our hallmark. Wake Tech graduates are doing great things in health care, computer technologies, hospitality, and many other fields, here in our community and beyond.

We hope you'll find the options you need here at Wake Tech. We're glad to lead the way for your exciting journey ahead.

Sincerely,

Dr. Stephen C. Scott

President

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About the Catalog

CATALOG INTRODUCTION

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 DISCRIMINATION

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
Regina Willis - 919-866-5670
Sorenson Video Phone for Deaf – 919-324-1508

Employment Access Benita Clark, Associate Vice President of Human Resources 919-866-5937

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

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.

HISTORY, STATEMENT OF VALUES, AND ACCREDITATION

WAKE TECH 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.

WAKE TECH MISSION STATEMENT

Mission Statement

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 it serves; to promote individual success in the workplace and in higher education; and to increase entrepreneurship and cultural, social, and economic development.

In pursuit of its mission, the college adheres to an open door policy, offering quality education that is accessible and affordable to all adults regardless of age, sex, socioeconomic status, ethnic origin, race, religion, or disability. Wake Tech provides vocational, technical, and occupational training; university transfer preparation; basic skills development; community partnership opportunities; and a variety of support services and resources.

WAKE TECH 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.

WAKE TECH 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.

SACS ACCREDITATION

Southern Association of Colleges and Schools Accreditation (SACS)

Wake Technical Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees, diplomas, and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Wake Technical Community College.

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.

Early Childhood Education Program Accreditation
The Early Childhood Education (AAS) program is accredited by the National Association for the Education of Young Children (NAEYC).

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).

PROGRAM APPROVALS

The following Wake Tech programs have been reviewed by and met the standards for approval of the organizations/agencies indicated:

- Emergency Medical Technology - North Carolina Office of Emergency Medical Services
- Human Services Technology - North Carolina Department of Health and Human Services, Division of Health Service Regulation
- Nursing - North Carolina Board of Nursing
- Phlebotomy - National Accrediting Agency for Clinical Laboratory Sciences
- Veteran's Services - North Carolina Approving Agency for Veterans Education and Training

COLLEGE MEMBERSHIPS

ABC of the Carolinas
Air Conditioning Contractors of America (ACCA)
American Association for Women in Community Colleges (AAWCC)
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 Marketing Association (AMA)
American Mathematical Association of Two-Year Colleges (AMATYC)
APPA Membership & Outreach Department
Association of College & University Auditors (ACUA)
Association Community College Business Officials (ACCBO)
Association for the Advancement of Sustainability in Higher Education (AASHE)
Association for Student Conduct Administration (ASCA)
Association for the Title IX Administrators (ATIXA)
Association of College and University Auditors (ACUA)
Association of Collegiate Conference and Events Directors-International (ACCED-I)
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 - Durham
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
Committee on Accreditation of Allied Health Education Programs (CAAHEP)
Community College Business Officers (CCBO)
Construction Management Association of America (CMAA)
Cooperating Raleigh Colleges (CRC)
Cooperative Education & Internship Association, Inc. (CEIA)
Council for Adult & Experiential Learning (CAEL)
Council for Resource Development (CRD)
Downtown Raleigh Alliance (DRA)
EduCause
Equal Access to Software and Information (EASI)
Help Desk Institute (HDI)
Home Builders Association of Raleigh-Wake County
Institute of Internal Auditors
International Association of Campus Law Enforcement Administrators (IACLEA)
International Council on Hotel, Restaurant, and Institutional Education (ICHRIE)
Leadership Raleigh Alumni Association
League for Innovation Community College, Leadership Institute, League Alliance Services
Learning Resources Network (LERN)
Mobile Lab Coalition
NASPA (Student Affairs Administrators in Higher Education)
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
National Academic Advising Association (NACADA)
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 Behavioral Intervention Team Association (NaBITA)
National Council for Marketing & Public Relations (NCMPR)
National Council for Continuing Education & Training (NCCET)
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 Orientation Directors Association (NODA)
National Restaurant Association/NC Restaurant Association (NC RLA)

National Student Employment Association (NSEA)
NC Sustainable Energy Association (NCSEA)
North Carolina Association for Community College Instructional Administrators (NCACCIA)
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 Coordinators for Veterans Affairs (NCACVA)
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 Center for Global Logistics (NCCGL)
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 Counseling Association (NCCA)
North Carolina Internal Affairs Investigators Association (NCIAIA)
North Carolina Law Enforcement Accreditation Network (NCLEAN/CALEA)
North Carolina Police Executives Association (NCPEA)
North Carolina Technology Association (NCTA)
Project Management Institute (PMI)
Public Relations Information Marketing Association (PRIMA)
Raleigh Television Network
Raleigh-Wake Human Resource Management Association (RWHRMA)
Rebuilding America's Middle Class (RAMC)
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 Hospitality Human Resource Association (THHRA)
Triangle Society for Human Resource Management (TSHRM)
University and College Designers Association (UCDA)
US Green Building Council (USGBC)
Wake Area Business Advisory Council (BAC)
World Future Society

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

WAKE TECH FOUNDATION AND ALUMNI ASSOCIATION

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/

WAKE TECH ALUMNI ASSOCIATION

Wake Tech appreciates alumni! We have created a web page especially for you – a convenient place to get news; learn more about benefits, career services, and other resources available to alumni; and contribute to the college.
Please consider sharing your Wake Tech story! Tells us about your personal and professional accomplishments on our Success Story page.

We'd love to hear from you!

ADMISSIONS

OPEN DOOR POLICY

Wake Technical Community College is subject to the Open Door Admission Policy established by the State Board of Community Colleges. This policy provides for the admission of any legal resident of the United States who is a high school graduate or at least 18 years old, or an emancipated minor.

This policy is based on the belief that Wake Tech has something to offer at all educational levels and that through effective guidance any person can find a place in an appropriate program of study.

Wake Tech reserves the right to refuse admission to any applicant who has been suspended or expelled for disciplinary reasons from another educational institution. Wake Tech also reserves the right to refuse admission to any applicant who poses an articulable, imminent, and significant threat to others. Such applicants will be evaluated on a case-by-case basis.

Procedures

An applicant who has been suspended or expelled for disciplinary reasons from another educational institution or who poses an articulable, imminent, and significant threat to others will be evaluated as follows:

An evaluation committee composed of the Chief of Police, SVP for Student Services, SVP for Curriculum Services, General Counsel & VP of Legal Services, and a Student Services Counselor shall review information presented by the Director of Admissions. At their discretion, the committee may request an interview with the applicant. The committee will make a recommendation to the President within 5 business days of their convening and review of the information presented. The President will make the final admission decision. Upon receiving the President's decision, the SVP for Student Services will notify the applicant.

NON-DISCRIMINATORY POLICY

Wake Technical Community College offers equal employment and educational opportunities to all employees, students, prospective employees, and prospective students. Equal educational opportunity, Affirmative Action 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:

Student Matters

Dean of Student Development/Student Conduct Officer
Main Campus: 919-866-5404
Northern Wake Campus: 919-532-5663

Employee Matters

Associate Vice President & Title IX Coordinator, Human Resources, 919-866-7894

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

Anyone wishing to apply to Wake Technical Community College should complete the online Application for Admission at http://admissions.waketech.edu/. The application should indicate whether the person is a curriculum student applicant or a special/visiting student applicant.

- A **curriculum student applicant** is anyone pursuing admission 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 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 planning to enroll in one or more curriculum courses but 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 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.

- **High School Programs/ Career and College Promise**
  The Career and College Promise program provides seamless dual enrollment educational opportunities for eligible North Carolina high school students. Contact the Associate Dean of Admissions for eligibility, admissions, and enrollment information.

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://www.waketech.edu/student-services/registration-student-records/transcripts.

PLACEMENT TESTING (ACCUPLACER and NC DAP)

The ACCUPLACER placement examination and the North Carolina Diagnostic Assessment and Placement (NC DAP) in Math determine skill level and readiness; they are administered to applicants pursuing a degree, diploma, or certain certificate programs. 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.

Students may be exempt from taking the ACCUPLACER or the NC DAP placement test or portions of the placement examination if they meet one of the following criteria:

- SAT scores of 520 or higher in Critical Reading (or Verbal) and 600 or higher in Math; scores must be less than five (5) years old at the time of application to Wake Tech; **or**
- ACT scores of 21 or higher in Reading, English, and Math sections; scores must be less than five (5) years old at the time of application to Wake Tech; **or**
- A grade of “C” or better in college-level English and math courses.

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 visit http://testingcenter.waketech.edu/ for additional test preparation and sample test sites.

PROGRAM PLACEMENT REQUIREMENTS

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 admissions advisor at 919-866-5000 for more information)

Certificate Programs

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

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

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
Computed Tomography and
Cosmetology

Magnetic Resonance Imaging Technology
Dental Assisting
Dental Hygiene
Emergency Medical Science
Medical Assisting
Medical Laboratory Technology
Phlebotomy
Radiography
Surgical Technology
Welding 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.

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.

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.

Information about the application process for international students can be found at http://international.waketech.edu/.

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 and upon readmission, will be subject to the current program of study requirements. 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.

WE ARE HERE TO HELP!

Locations
Main Campus, 9101 Fayetteville Rd. (401 South), Raleigh, NC 27603
Northern Wake Campus, 6600 Louisburg Rd., Raleigh, NC 27616
Perry Health Sciences Campus, 2901 Holston Ln., Raleigh, NC 27610

ADMISSIONS

Western Wake Campus, 3434 Kildaire Farm Rd., Cary, NC 27518
Public Safety Education Campus, 321 Chapanoke Rd., Raleigh, NC 27603

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://www.waketech.edu/student-services/catalog

REGISTRATION AND RECORDS

CURRICULUM CLASS SCHEDULES

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, Perry 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.

CURRICULUM REGISTRATION DATES

Students begin registering at different times, depending on their status as:

1. Continuing degree/diploma/certificate-seeking students, based on the number of credits completed at Wake Tech;
2. Newly admitted;
3. Special students (non-degree seeking); or
4. High school/Career & College Promise/early admission.

Registration windows and other important dates are located on the Registration Calendar at http://calendars.waketech.edu. For a general overview of important dates, please see the Academic Calendar at the end of the admissions chapter. Please note that calendars are 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.

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.

.North Carolina Residency Forms
Residence and Tuition Status Application or https://secure.waketech.edu/eaglesnest/forms/files/427_SSncresapp.pd
- Attachment A: Visa Information or https://secure.waketech.edu/eaglesnest/forms/files/427A_SSncres-visa.doc
- Attachment B: Parent or Spouse of Student or https://secure.waketech.edu/eaglesnest/forms/files/427B_SSncres-sup.doc

Procedures for Hearing Appeals
In the event that an individual disagrees with the 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.

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://www.waketech.edu/student-services/registration-student-records/transcripts. 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.

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 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: Native speakers of French and Spanish are not eligible to receive credit for 100-level foreign language classes.

Most challenge exams are administered within the appropriate department; however, a select number of courses including BUS 110, 121, 137, 147, 153; ENG 101; and 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.

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. Contact the College Board at http://clep.collegeboard.org/?affiliateId=rdr&bannerId=clep for more information or to locate the nearest test site. All College Level Program (CLEP) credit will be evaluated on the basis of the receiving institution's policy.

CLEP Examination	Minimum Score Needed for Credit	Wake Tech Equivalency	Semester Hours
Business			
Financial Accounting	50	ACC 120	4
Business Law, Introductory	50	BUS 115	3
Information Systems and Computer Applications	50	CIS 110, 111	3
Management, Principles of	50	BUS 137	3
Marketing, Principles of	50	MKT 120	3
Composition and Literature			
American Literature	50	ENG 231, 232	6
Analyzing and Interpreting Literature	50	ENG 261, 262	6
College Composition	50	ENG 111, 112	6
English Composition without Essay	50	ENG 111, 112	6
English Literature	50	ENG 241, 242	6
College Composition Modular	N/A	N/A	N/A
Humanities	50	HUM 211, 212	6
Foreign Languages			
French Language, Level 1	50	FRE 111, 112	6
French Language, Level 2	59	FRE 111, 112, 211, 212	12
German Language, Level 1	50	N/A	N/A
German Language, Level 2	60	N/A	
Spanish Language, Level 1	50	SPA 111, 112	6
Spanish Language, Level 2	63	SPA 111, 112, 211, 212	12
Level 1 – Equivalent to the first two semesters (or 6 semester hours) of college-level foreign language course work			
Level 2 – Equivalent to the first four semesters (or 12 semester hours) of college-level foreign language course work			
History and Social Sciences			
American Government	50	POL 120	3
Educational Psychology, Introduction to	50	PSY 263	3
History of the United States I: Colonization to 1877	50	HIS 131	3
History of the United States II: 1865 to Present	50	HIS 132	3
Human Growth and Development	50	PSY 241	3
Macroeconomics, Principles of	50	ECO 252	3
Microeconomics, Principles of	50	ECO 251	3
Psychology, Introductory	50	PSY 150	3
Social Sciences and History	50	HIS 11 and HIS 112	6
Sociology, Introductory	50	SOC 210	3
Western Civilization I: Ancient Near East to 1648	50	HIS 121	3
Western Civilization II: 1648 to Present	50	HIS 122	3
Sciences and Mathematics			
Biology	50	BIO 111	4
Calculus	48	MAT 223 or MAT 271	4
Chemistry	50	CHM 151	4
College Algebra	50	MAT 161*	3
College Algebra – Trigonometry2	50	MAT 175*	4
College Mathematics	50	MAT 140*	3
Precalculus	50	MAT 175*	4
Natural Sciences	50	N/A	
Trigonometry2	50	N/A	
*Equivalency is given only for the lecture (MAT ###) and not for the lab (MAT ###A)			

Table Last updated 12/18/12

Advanced Placement (AP) Credit
The College Entrance Examination Board sponsors an advanced placement program that enables high school students to complete college-level courses and to demonstrate college-level achievement through examinations. Wake Tech will award non-course work equivalency for students who meet minimum scores on AP exams. These equivalencies can then be applied toward the student's graduation requirements.

Note to students pursuing College Transfer degrees (Associate in Arts or Associate in Sciences) or students intending to transfer courses to UNC-system schools: "Advanced Placement (AP) course credits awarded for a score of three or higher, are acceptable as part of a student's successfully completed general education core under the Comprehensive Articulation Agreement. Credit for two successive courses can only be awarded with a score of five.

Only one course of credit (MAT 271 for four credit hours) may be awarded for the AP Calculus AB exam with a score of three, four, or five; two courses of credit (MAT 271 and 272 for eight credit hours) may be awarded for the AP Calculus BC exam with a score of three, four or five. Students who receive AP course credit at a community college but do not complete the general education core will have AP Credit awarded on the basis of the receiving institution's AP policy. Transferred-in courses from institutions other than North Carolina community colleges are not a part of this agreement.

AP Examination	Minimum Score Needed for Equivalency	Wake Tech Course Equivalency	Semester Hours
Art History	3	ART 114 and ART 115	6
Biology	3	BIO 111	4
	4	BIO 111 and BIO 112	8
Chemistry	3	CHM 151	4
	4 or 5	CHM 151 and CHM 152	8
Computer Science A	3	CIS 115	3
Computer Science B	3	CIS 115 and CSC 120	7
Economics, Macro	3	ECO 252	3
Economics, Micro	3	ECO 251	3
English, **Language** and Composition	3	ENG 111 and 112 or	6
English, **Literature** and Composition	3	ENG 111 and ENG 113	6
Environmental Science	3	BIO 140 and BIO 140A	4
European History	3	HIS 121 and HIS 122	6
French Language	3	FRE 111, 181, 112, and 182	8
	4	FRE 111, 181, 112, 182, 211, and 281	12
	5	FRE 111, 181, 112, 182, 211, 281, 212, and 282	16
French Language Literature	4	FRE 111 and 181	4
	5	FRE 111, 181, 112, and 182	8
Spanish Language	3	SPA 111, 181, 112, and 182	8
	4	SPA 111, 181, 112, 182, 211, and 281	12
	5	SPA 111, 181, 112, 182, 211, 281, 212 and 282	16
Spanish Language Literature	4	SPA 111 and 181	4
	5	SPA 111, 181, 112, and 182	8
Government and Politics, Comparative	3	POL 210	3
Government and Politics, United States	3	POL 120	3
Mathematics, Calculus AB	3, 4, or 5	MAT 223* or MAT 263* or MAT 271	3

Mathematics, Calculus BC	3, 4, or 5	MAT 223* or MAT 263* or MAT 271 and MAT 272	3
Physics, Physics B	3	PHY 131 and PHY 133 or PHY 151 and PHY 152 or PHY 251	8 8 4
Physics, Physics C: Mechanics	3	PHY 131 or PHY 151 or PHY 251	4
Physics, Physics C: E and M	3	PHY 252	4
Psychology	3	PSY 150	3
Spanish – Language and Literature	3	SPA 111 and SPA 112	6
	4	SPA 211	3
	5	SPA 212	3
Statistics	3	Mat 151* or MAT 155*	3
US History	3	HIS 131 and 132	6
*Equivalency is given for only the lecture (MAT ###) and not for the lab (MAT ###A)			

Table Last updated 12/18/12

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.

DANTES Examination	Minimum Score Needed for Equivalency	Wake Tech Course Equivalency	Semester Hours
Art of the Western World	48	ART 114	3
Introduction to World Religions	49	REL 110	3
Principles of Public Speaking	47	ENG 115	3
Technical Report Writing	47	ENG 114	3
Introduction to Computing	45	CIS 110	3

Table Last updated 12/18/12

JST (Joint Services Transcript)
Prospective students who have military experience may be able to obtain some equivalencies toward an AAS degree, diploma, or certificate for training received in military services. Individuals seeking equivalency for military training must have an official AARTS transcript sent to the college. The appropriate dean or department head will evaluate the transcript, and equivalency will be awarded as appropriate.

Effective January 1, 2013, AARTS transitioned to a new electronic transcript service called JST (Joint Services Transcript). JST has produced a uniform transcript of all military training and experiences for service members in all branches and includes Army Officer and Warrant Officer training, joint military training conducted by other services, and DANTES-funded test scores. The merger of AARTS with JST was completed December 31, 2012. Personnel data should be reviewed to ensure accuracy and documentation of completed training in the Army Training Requirements and Resource System (ATRRS).

Navy Articulation Agreement
Wake Tech will award equivalencies for specific naval training courses in partial fulfillment of program requirements leading to an Associate in Applied Science degree in Industrial Systems Technology. Completion of coursework through Wake Tech and the Navy training curricula and job experience is required before the student is eligible to receive the associate's degree from Wake Tech.

US Navy Course	Wake Tech Course Equivalency	Semester Hours
Basic Ent. Submarine School	BPR 111	3

	MNT 110	2
Mach. Mate Sub. A	ELC 117	4
	HYD 121	2
	PLU 111	2
MM/Auxiliary	MNT 111	
Fireman	BPR 130	2
	MNT 150	2
Sub. Atmosphere Systems	AHR 112	4
Third Class (E-4)	ELC 113	4
	PLU 211	3
	ELC 115	4
	MNT 240	2
Pneumatics Submarine Maintenance	MNT 220	2
Sub. Refrig. R-12	AHR 113	4
Sub. Hyd. Combined	MNT 230	2

Table Last updated 12/18/12

Curriculum French and Spanish Placement Exams
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/.

Foreign language faculty reserves 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.

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 reserves the right to request that students take the Language Placement Exam.

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 programs will be granted equivalency for related Wake Tech equivalencies, upon documented proof of earning the CAP, CPS, CPC, CCA, or CCS-P rating within the last six years.

CAP or CPS Rating	Wake Tech Course Equivalency	Semester Hours
Part I Finance and Business Law	BUS 115	3
	ACC 120	4
	ECO 252	3
Part I (a.) Office Systems & Technology	OST 131	2
	CIS 110	3
Part II Office Systems and Administration	BUS 260	3
	CIS 110	3
	OST 131	2
	OST 181	3
Part II (a.) Office Administration	OST 184	3
	BUS 260	3
Part III Management	BUS 137	3
	BUS 151	3
	BUS 153	3
Part IV Organizational Planning	HUM 230	3
	BUS 137	3
	BUS 153	3
CPC, CCA, or CCS-P	**Wake Tech Course Equivalency**	**Semester Hours**
CPC Certificate	OST 148, OST 247, and OST 248	7
CCA Certificate	OST 148, OST 247, and OST 248	7
CCS-P Certificate	OST 148, OST 247, and OST 248	7

Table Last updated 12/18/12

Computer Concepts Equivalencies

Wake Tech will award equivalencies for specific computer-related credentials awarded by a third party, including IC3 Exams by Certiport, Microsoft Certification, Cisco Course Completion and Certification, as well as CompTIA certification.

Accrediting Agency	Wake Tech Course Equivalency	Semester Hours
IC3 Exams by Certiport: IC3 – Living Online Key Applications Computing Fundamentals **(All 3 must be successfully completed)**	CIS 111	2
Microsoft:		
Windows 7-Configuring	NOS 130	3
Windows 7 – Enterprise Desktop Supt. Tech.	CTS 272	3
Windows Server 2008 – Server Administrator	NOS 230	3
Windows Server 2008 – Ntwk. Infrastruct. Config.	NOS 231	3
Windows Server 2208 – Appl. Infrastruct. Config.	NOS 232	3
Windows Server 2008 – Active Directory Config.	NET 198	3
Cisco: Partial Course Completion		
CCNA Exploration 1: Network Fundamentals	NET 125	3
CCNA Exploration 2: Routing Protocols & Concepts	NET 126	3
CCNA Exploration 3: LAN Switching & Wireless	NET 225	3
CCNA Exploration 4: Accessing the WAN	NET 226	3
CCNA Discovery 1: (both courses must be	NET 125	3

completed) Networking for Home & Small Business Working at a Small-to-Medium Business or ISP	NET 126	3
CCNA Discovery 2: (all four courses must be completed) Networking from Home & Small Businesses Working at a Small-to-Medium Business or ISP Introducing Routing & Switching in the Enterprises Designing & Supporting Computer Networks	 NET 125 NET 126 NET 225 NET 226	 3 3 3 3
CCNA Discovery 3 (all 5 courses must be completed) Networking to Home & Small Business Working at a Small-to-Medium Business or ISP	 NET 125 NET 126	 3 3
CCNA Exploration 5 Routing Protocols & Concepts LAN Switching & Wireless Accessing the WAN	NET 225	3
CCNP: Implementing Cisco IP Routing	NET 270	3
CCNP: Implement Cisco IP Switched Networks	NET 272	3
CCNP: Troubleshooting & Maintain Cisco IP Networks	NET 273	3
Cisco: Completed Certification Process		
Cisco Certified Network Associate (CCNA)	NET 125, NET 126, NET 225, and NET 226	12
Intercon. Cisco Ntwk Devices 1/Cisco Cert Ent Lev Tech. (ICND1)	NET 125	3
Interconnecting Cisco Network Devices 2 (ICND2)	NET 125, NET 126, NET 225, and NET 226	12
Cisco Certified Network Professional (CCNP)	NET 270, NET 272, and NET 273	9
CompTIA:		
A+ Essentials & A+ Practical Applications	CTS 120 and CTS 220 or CTS 120 and NOS 110	6
Network +	NET 110	3
Security +	SEC 110	

Table Last updated 12/18/12

Associate Degree Nursing - Advanced Placement Option for LPNs

The LPN to ADN Advanced Placement Option awards eligible licensed practical nurses 19 credit hours toward the Associate Degree Nursing program, pending successful completion of core nursing courses. 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.

Students should contact the Associate Degree Nursing Department Head or a Health Science Admissions Counselor with questions about admission criteria.

LPN Credentials	Wake Tech Course Equivalency (Awarded at end of program)	Semester Hours
LPN Diploma and Licensure	NUR 111	8
	NUR 112	5
	NUR 113	5
	NUR 211	5

Table Last updated 12/18/12

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.

Certification	Wake Tech Course Equivalency	Semester Hours
EMT – Basic Certification	EMS 110	7
One year active service as an EMT	EMS 150	2
EMT – Intermediate Certification	EMS 120 and EMS 121	5

Table Last updated 12/18/12

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.

CAGC Course	Wake Tech Course Equivalency	Semester Hours
Course 1 – Professional Construction Supervisor	CMT 210	3
Course 2 – Total Safety Performance	CMT 212	3
Course 3 – Effective Preplanning and Project Scheduling	CMT 214	3
Course 4 – Cost Control and Productivity Improvement	CMT 216	3
Course 5 – Human Side of Project Success	CMT 218	3

Table Last updated 12/18/12

High School Articulation Agreement (HS)
North Carolina Department of Public Instruction and the North Carolina Community College System have a statewide articulation agreement in which students may be eligible to receive college credit after completion of identified Career-Technical Education (CTE) courses in high school. This agreement creates a systematic and seamless process in which students can move from high school to community college without having to duplicate efforts or repeat courses. Criteria used to award college credit for identified CTE courses include the following:

- Final grade of B or higher in the course
- A RAW score of 93 or higher on the standardized CTE post-assessment test. (score revision effective Fall 2012)
- To receive articulated credit, students must enroll at the community college within two years of his or her high school graduation date.
- The student's official high school transcript must include the CTE post-assessment scores.

Community college officials have the responsibility for verifying and accepting the articulated course or courses on the high school transcript for college credit.

TRANSFER CREDITS

Transferred Coursework
Wake Tech will consider courses for transfer equivalency from other colleges or accredited collegiate institutions. Such institutions must be accredited by a commission responsible for accrediting degree-granting institutions classified as collegiate, and one that is housed in a regional or national accrediting agency.

Only those courses with a grade of "C" or higher will be considered for transfer. Developmental Math credits (DMA course prefix) from a North Carolina community college will be considered for transfer with a grade of "P" for passing. 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; transfer equivalency will be recommended by the appropriate dean (or a designee).

All decisions about transfer equivalency are discretionary on the part of the college: whether equivalency will be allowed, how much will be allowed, and how it will be applied. The college will apply principles recommended by accredited 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 established standard equivalencies. Any courses that are not found in the standard equivalencies database are forwarded to the registrar or curriculum deans for review and decision. Recommended equivalencies are given and noted on the student's academic record.

Note: A granted equivalency means only that a course is equivalent to a Wake Tech course. It **does not** mean that the course satisfies a graduation or program requirement; that determination depends on whether the course is listed as a requirement for the specific program (major) the student enrolled in at the time of admission to the college. A student who changes programs (major) should request a transcript re-evaluation to determine if the change affects 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, which may alter the impact of previously awarded transfer credit toward program completion.

Transfer credit does not factor into a student's curriculum GPA calculation. A grade of TA, TB, or TC is awarded for the transferred credit internally to aid with financial aid evaluations. These transfer credit grades do not appear on the student transcript.

Students must complete at least 25 percent of the hours required for a degree, diploma, or certificate in residence at Wake Tech, and final coursework must be completed in residence.

CHANGE PROGRAM OF STUDY

Any student wishing to change from one curriculum to another must initiate the change through an Advisor at the Main, Northern Wake, Perry 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).

CHANGE IN STUDENT DATA (Name, Address, E-Mail)

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 Records Services Division, Wake Technical Community College, 9101 Fayetteville Road, Raleigh, NC 27603

SECURITY OF STUDENT RECORDS

Annual Notice To Students Of Their Rights Under The Family Educational Rights And Privacy Act Of 1974

Wake Technical Community College complies fully with the Family Educational Rights and Privacy Act of 1974 (FERPA) and informs students of their rights under FERPA three times per year (by the fifth day of the fall, spring, and summer terms) via their college-issued email accounts. FERPA, as amended, 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 FERPA, students who seek the correction of inaccurate or misleading data or who have other complaints should follow the grievance procedure found in the college catalog. 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 FERPA.

Wake Tech's policy establishing its intent to comply with FERPA and procedures for implementing the provisions of FERPA are published in the college catalog. Questions about FERPA or Wake Tech's policy and procedures should be directed 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 "Educational Records"
The term "educational records" as defined under the provisions of FERPA includes 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 of students that are made or maintained by physicians, psychiatrists, psychologists, counselors, 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. Records of alumni or former students.

Students may not review or inspect:

1. Financial records of the parents of the students or other information therein contained.
2. Confidential recommendations, if the student has signed a waiver of his or her 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 Wake Tech 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 as covered by FERPA, 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 of student 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 FERPA, are released only with the written consent of the student. Such written consent must:
1. Specify the records or 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. In the course of fulfilling its contractual obligations with third party vendors, the college recognizes that the third party vendor is acting as a legal agent ("school official") of the college and will use the confidential information for the purposes stated in the agreement. Currently, the college has entered into agreements with vendors that include but are not limited to the following:

- Barnes and Noble Bookstores
- Higher One
- National Student Clearinghouse
- Maxient Student Conduct Manager
- College Foundation Incorporated (CFI) School Services
- Visual Zen
- Academic Works
- Hyland

- Informer
- Starfish
- MAP

Confidential information requested by anyone 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. A subpoena: Students will be notified immediately by registered mail that their records are being subpoenaed.
3. At the request of the parents of a student, upon receipt of a certified copy of their most recent Federal Income Tax Form naming the student 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 deemed necessary (by a responsible person) to protect the health or safety of the student or others.

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

Directory Information
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. Address
4. Major field of study or program
5. Dates of enrollment
6. Degrees, diplomas, or certificates received
7. College honors

The college designates the following categories of student information as “limited-use directory information”:

1. Students’ college-issued electronic mail addresses

2. Photographs, videos, or other media containing a student’s image or likeness
   As designated limited-use directory data, this information will not be provided to external parties not contractually affiliated with the college. Use and disclosure of this information shall be limited to (a) publication on websites hosted by, on behalf of, or for the benefit of the college; (b) publication in print for purposes including but not limited to college marketing, public relations, outreach, and press releases; at college events including but not limited to athletic events, college fairs and open houses, student organization activities, campus atmosphere, etc. (c) college officials who have access, consistent with FERPA, to such information and only in conjunction with a legitimate educational interest; and (d) external parties contractually affiliated with the college, including official third party vendors and partner institutions with a joint memorandum of understanding.

   Any release of student information for public use or use by the media, except for the specified directory information and limited-use directory information detailed above, must have the prior written approval of the student(s) involved.

Record of 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(s) who have 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 as 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. In the event that the registrar fails to resolve the request to the student's satisfaction, the student may continue the grievance through compliance with the grievance procedure found in the college catalog. 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!

Locations

Main Campus, 9101 Fayetteville Road (401 South)
Northern Wake Campus, 6600 Louisburg Road
Perry 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://www.waketech.edu/student-services/catalog

FINANCIAL AID

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 e-mail notifying you that your financial aid award may be viewed on WebAdvisor. The e-mail notification will be sent to your official student e-mail address, my.waketech.edu.

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. ***See note below.**
- 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.

*** Note: Valid High School Diploma or GED Required to Receive Financial Aid**

To receive financial aid, students must have a valid high school diploma or GED. Students who have a high school diploma that is determined to be invalid are ineligible to receive financial aid; a diploma will be considered invalid if there is reason to believe that limited coursework was required to complete the diploma or a fee was charged by the agency that issued the diploma.

Students who wish to receive financial aid may establish eligibility by completing one of the following requirements based on their first period of enrollment. Enrollment is defined as actively registered and attending classes.

Enrollment **prior** to July 1, 2012

1. Complete GED
2. Pass an approved ability to benefit test and earn the minimum required score
3. Enroll and pass a minimum of six curriculum credit hours
4. Transfer six credit hours from a previous institution

Enrollment **after** July 1, 2012

1. Complete GED

You will not be denied admission to Wake Tech; however, you will not be eligible to receive financial aid until one of the above items is completed. Please contact Regina Huggins, Dean, Financial Aid & Veteran Affairs, if you have questions regarding this requirement.

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, further referred to as "Veterans". Veterans who wish to use their G.I. Bill education benefits 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 is available at www.gibill.va.gov.

Active duty military personnel 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 will not be certified for VA benefits until all entrance/admissions criteria are met. The Wake Tech Certifying Officials also require "official" transcripts, DD-214, NOBE, and/or Certificate of Eligibility. Veterans using GI Bill benefits are authorized to apply for Federal Financial Aid. 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 full-time load would be eligible for the full benefit. To receive the full benefit, the veteran must be enrolled at the full time rate for the particular semester. Veterans should contact a Wake Tech VA certifying official, located in the Student Services Building, room 128, for more information.

Veterans are afforded the same rights as any Wake Tech student and must meet the same academic requirements and standards. 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 VA enrollment certification terminated. Enrollment certification will not be restored until GPA standards are met, and then only upon submission of a Satisfactory Academic Progress Appeal (SAP) Form. After submitting an SAP and receiving an approved appeal, veterans may have their enrollment certification restored for subsequent terms.

Any changes to a veteran's enrollment must be immediately reported to the Wake Tech VA Certifying Official. Reporting delays or omissions can adversely affect future benefits. 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 Internet, online or hybrid courses) provided that:

- The course or courses are required by their current program of study.
- 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.

Veteran Affairs Office Hours and Locations

Main Campus
Student Services Building (SSB), Room 128
Monday-Thursday 8:00 am – 6:00pm
Friday, 8:00 am – 5:00 pm

Northern Wake Campus
Building A, Room 322
Wednesday, 9:00 am – 1:00 pm

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.

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.

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 2014-2015, annual awards range from $573-$5730. The maximum PELL-eligible Estimated Family Contribution (EFC) is 5157, with a minimum award for a full-time student of $602. Award ranges are subject to change based on congressional action.

Lifetime Eligibility for Federal Pell Grants
Effective July 1, 2012, Pell grants are limited to a lifetime maximum of the equivalent of 12 full-time semesters or six years (or 600%) for community colleges, vocational schools, and public and private four-year universities. Limits will be tracked by the Department of Education for each institution the student has attended.

A full year (100%) of eligibility is counted regardless of the amount of the grant received. For example, a student who is eligible for $3000 in Pell grant funds who received $1000 in the fall term, $1500 in the spring term, and $500 in the summer term, has been awarded 100% for the year. Pell grants are only available to undergraduate students, so once a student has earned a bachelor's degree, he is no longer eligible for Pell, even if the 600% eligibility has not been met. Students are also required to meet and maintain satisfactory academic progress standards to maintain eligibility.

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 may 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.

Iraq and Afghanistan Service Grant (IASG)
If your parent or guardian died as a result of military service in Iraq or Afghanistan, you may be eligible for an Iraq and Afghanistan Service Grant, provided you meet the following conditions:

- you meet all requirements for the Federal Pell Grant, however your Expected Family Contribution makes you ineligible
- your parent or guardian was a member of the U.S. armed forces and died as a result of military service performed in Iraq or Afghanistan after the events of 9/11/01; and
- you were under 24 years old or enrolled in college at least part-time at the time of your parent's or guardian's death.

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 or who have exceeded the lifetime PELL Grant maximum funding level 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 or who have exceeded the lifetime PELL Grant maximum funding level are not eligible.

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

William D. Ford Federal Direct Loan Program

Direct Subsidized Loans
Direct subsidized loans are need-based: To qualify for a direct subsidized loan, a student must demonstrate financial need as a result of filing the FAFSA. Eligibility is determined by the institution; funds are provided by the U.S. Treasury and repaid to agencies designated by the U.S. Department of Education. The amount that may be borrowed per year ranges from $3500 to $5500 for undergraduates, depending on grade level; it is set by the federal government. Interest on the loan is paid by the government as long as the student is enrolled at least half time. The student becomes responsible for repayment (principal and interest) six months after graduating or dropping below half-time enrollment. **

For new loans made between July 1, 2012, and July 1, 2014, interest accruing during the six-month grace period will **not** be paid by the federal government. The student is responsible for that interest, even though loan **repayment** does not begin until after the six-month grace period.

Direct Unsubsidized Loans
Direct unsubsidized loans are not need-based: To qualify for a direct unsubsidized loan, students must still complete a FAFSA. Eligibility is based on the cost of attendance minus other expected financial aid. Students are charged interest from the date the loan funds are disbursed. Annual maximums, interest rates, and repayment provisions are the same as those for direct subsidized loans.

Direct Loans for Parents
Parents of a dependent undergraduate student may apply for a PLUS loan to help meet costs of attendance not covered by other financial aid. Completion of a FAFSA is required, and parents must submit a PLUS Request form to the Financial Aid Office certifying costs of attendance and other financial aid anticipated. PLUS loans generally offer better interest rates and

repayment options than other education loans. Repayment typically starts when funds are disbursed; however, deferments are available upon request.

2014-15 Direct Loan Interest Rates and Fees
(for loans with a first disbursement date on or after December 1, 2013)

- Subsidized Interest Rate: 3.4% Fee: 1.072%*****
- Unsubsidized Interest Rate: 6.8% Fee: 1.072% *****

*****Direct Loan Fee: The Subsidized and Unsubsidized Federal Direct Stafford Loans have a 1.072% origination fee which will be deducted from the gross amount of the loan borrowed.

North Carolina Loan Programs

Forgivable Education Loans for Service (NCFELS)
The Forgivable Education Loan for Service was established by the North Carolina General Assembly in 2011; the first loans were available for the 2012-13 academic year. The loan provides financial assistance to qualified students who are committed to working in North Carolina in fields designated as critical employment shortage professions. Visit http://www.cfnc.org/FELS for specific program details and deadlines.

Loan Program for Health, Science, and Mathematics
Legal residents of North Carolina who have been accepted as full-time students in accredited associate's degree programs are eligible for this program. Students must be enrolled in specific health, science, or mathematics-related programs of study and must be classified as North Carolina residents for tuition purposes. Students should visit http://www.cfnc.org/paying/loan/career/career_hsm.jsp for specific program eligibility criteria and application details.

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.

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 program 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. Please refer to Financial Award Information for additional information regarding disbursement requirements.

- Student must be enrolled at **least halftime** when funds are scheduled to be released to receive funding from the North Carolina Community College Grant or the North Carolina Education Lottery Scholarship

- Student must maintain continuous enrollment with a minimum of six credit hours to receive funding from the Direct Loan Program and be enrolled at **least six credit hours** at the time funds are scheduled to be released.

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. Wake Tech now uses HigherOne to process all refunds. A card will be mailed to the address on record and will arrive in a bright, green envelope. Once you receive the card, go to www.mywaketechcard.com to select your refund preference. You may choose any of the following:

1. Open a bank account with HigherOne and have your funds deposited into this account (1-2 days)

2. Have the funds directly deposited into an existing bank account (2-3 days)
3. Have a paper check mailed to you (5-6 days)

Once your selection has been made, you should receive your refund within the time indicated above. Refer to the refund disbursement schedule posted on http://financialaid.waketech.edu for the date your refund will be released to HigherOne.

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 within the published refund period. 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.

State Grant Repayments
Effective Fall 2012, North Carolina Community College Grant and North Carolina Education Lottery Scholarship fund recipients, who completely withdraw from classes prior to the 30% point of the term, will be required to repay a percentage of funds.

If You Change Your Mind
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. You are responsible for payment of all tuition and fee charges if you have decided not to attend and fail to drop your classes.

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

STANDARDS OF SATISFACTORY ACADEMIC PROGRESS FOR FINANCIAL AID RECIPIENTS

Standards of Satisfactory Academic Progress for Financial Aid Recipients
Effective July 1, 2013

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.

Pre-Curriculum Coursework
Although pre-curriculum courses do not count toward completion of a degree, federal regulations require that pre-curriculum courses be included when calculating cumulative GPA and cumulative completion rate for the purpose of determining Satisfactory Academic Progress for financial aid recipients. Federal regulations also state that students may not receive financial aid (including grants and loans) for more than 30 credit hours of pre-curriculum coursework. Students who exceed this limit will be denied financial aid, and denial cannot be appealed. Students are limited to one Direct Loan for completion of pre-curriculum coursework.

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 Catalog.

A student who exceeds the maximum allowable time frame for completing a program of study may appeal. 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. Failure to comply with the plan will result in termination of financial aid.

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 generally limited to two termination appeals requests while attending Wake Tech. Please refer to the Satisfactory Academic Appeal website for information regarding submission deadlines.

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. . Failure to meet the requirements of the academic plan will result in termination of financial aid the next semester of attendance. A student's academic progress status does not return to satisfactory until he or she earns a cumulative 2.0 GPA and a cumulative 67% progress rate and does not exceed the maximum timeframe for program completion.

Treatment of Selected Grades

Withdrawals: Credit hours in which a student receives a grade of "W", "WP", WF, R, 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. Upon notification that the final grade has been submitted, the actual grade, credit hours attempted, and credits earned will be used to determine if the student is maintaining satisfactory academic progress.

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 or her program of study at Wake Tech. Transfer hours applicable to the student's program of study count favorably towards the student's rate of progression.

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: Per federal regulations, financial aid can pay for one repeat of a course in which a grade of A,B,C,D,or P was earned. All repeated courses are included as attempted credits. A student may not receive financial aid for repeating a course in which he or she previously earned a grade of "A," because a grade of "A" cannot be improved upon.

Failed course: Per federal regulations, financial aid can pay for a failed course until the course is successfully passed; however, each attempt is included in both attempted and earned credits. As a result, a student's rate of progression may be negatively affected. Students must adhere to Wake Technical Community College's policy regarding limitations on repeat courses.

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 or R is **not** considered a successful completion.

KEY TERMS RELATED TO SATISFACTORY ACADEMIC PROGRESS STANDARDS

Satisfactory: .Student has met the minimum SAP standards and is eligible to continue to receive federal financial aid for the next semester.

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 and is eligible to continue to receive financial aid. The student may receive financial aid during the warning period.

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.

Academic Plan: A plan developed by the institution and the student to ensure that the student is able to meet the institution's satisfactory academic progress standards by a specific point in time.

Appeal: A process by which a student who is not meeting the institution's satisfactory academic progress standards petitions the institution for reconsideration of the student's eligibility for financial aid.

Qualitative component: The specified standard, typically the grade point average (GPA) that a student must have at each evaluation period.

Quantitative component: The pace at which students must progress through their program to ensure that they will graduate within the maximum timeframe.

Transfer Credit: Credit hours from another institution which are accepted toward the student's education program at the current institution and which count as both attempted and completed hours.

Satisfactory Academic Progress Policy: An institution's policy for determining whether an otherwise eligible student is making satisfactory academic progress in his or her educational program in order to receive financial aid assistance.

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; however, satisfactory academic progress is automatically reviewed at the end of each semester for students with an ISIR on file within the past three years.

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 placed on probation and an Academic Plan established; 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 SAF Appeals Committee is composed of the Dean, Financial Aid & Veteran Affairs, the College Registrar or designee, 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 their return.

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 for that student to receive student aid.

NOTE: Warning status or termination status due to failure to make satisfactory academic progress can be changed only by successfully completing classes – a student may not improve his or her status by simply "sitting out" a semester. Once the student meets both SAP requirements – a cumulative GPA of 2.0 and a cumulative completion rate of 67% – the student's status will change and he or she will be considered in good standing for financial aid.

The Financial Aid Director (or designee) is the person authorized by Wake Technical Community College to provide financial aid information to students. Office hours: 8 a.m.-6 p.m., Monday-Thursday, and 8 a.m.-5 p.m. on Friday.

WE ARE HERE TO HELP!

Locations

Main Campus
9101 Fayetteville Rd. (401 South), Raleigh
Student Services Bldg Rom 015
Monday-Thursday 8:00 a.m. - 6:00 p.m.
*Friday 8:00 am - 5:00 pm **(Limited Services offered in Student Services Building, Lobby Lower Level)**

Perry Health Sciences Campus
2901 Holston Ln., Raleigh
HSB Suite 102, RM 105
Monday - Thursday 08:00 am - 4:00 pm

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

Northern Wake Campus
6600 Louisburg Rd. (401 North), Raleigh
Building A, RM 322
Monday-Thursday 8:00 am - 6:00 pm
*Friday 8:00 am - 5:00 pm **(Limited Services offered in Building A, Room 322)**

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://www.waketech.edu/student-services/catalog

ATTENDANCE POLICY

Absence
Absences from class are a serious deterrent to good scholarship. The College, therefore, stresses regular class attendance. The College 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 meetings. An absence is defined as missing one-third or more of any regularly scheduled class meeting. 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 Registration and Student Records Services Division , 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.

For information on grades associated with attendance policy violations, see section entitled “Assignment of Grades for Attendance Policy Violations and Withdrawal”.

Tardiness and Early Departure
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.

ABSENCES FOR 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

Adding a Course
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.

Dropping a Course
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. 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, courses, or the College must initiate the withdrawal process through one of the following ways:

1. Students may 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.
2. Students may 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.

Assignment of Grades for Attendance Policy Violations and Withdrawals
A part of faculty responsibility at Wake Technical Community College is the assignment of student grades according to methods which are professionally acceptable, communicated to everyone in the class, and applied to all students equally.

Grade of W:
Students who withdraw or who are withdrawn for any reason, including attendance policy violations, on or before the 60% point are assigned a grade of W. No grade of W will be assigned after the 60% date. In accordance with the state refund policy for community colleges, there is no tuition refund allowable after the 10% date of the term, even for withdrawal for any reason other than military deployment or death of the student.

Grade of WP:
A grade of WP is given when a student withdraws after the 60% point for a legitimate, extenuating circumstance such as medical reasons, death in the family, change in job schedules (i.e., suddenly required to travel), changes in daycare, no transportation, etc. It is the student's responsibility to justify the extenuating circumstances to the satisfaction of the instructor. The grade of WP counts the same as a W in the determination of the student's GPA. In accordance with the state refund policy for community colleges, there is no tuition refund allowable after the 10% date of the term, even for withdrawal for any reason other than military deployment or death of the student.

Grade of WF:
Students who withdraw or who are withdrawn after the 60% point with no legitimate, extenuating circumstances will be assigned a grade of WF. If a student stops attending class before the last test, final project, and/or final exam and has violated the attendance policy, then that student will receive the grade of WF. The grade of WF counts the same as an F in the determination of the student's GPA. In accordance with the state refund policy for community colleges, there is no tuition refund allowable after the 10% date of the term, even for withdrawal for any reason other than military deployment or death of the student.

Grade of F:
A grade of F indicates that the student completed the class (continued to attend class without violation of the attendance policy) but earned the F (failing) grade. If a student stops attending class before the last test, final project, and/or final exam but has not violated the attendance policy, then that student will receive the grade earned, including zeroes for the work missed. In accordance with the state refund policy for community colleges, there is no tuition refund allowable after the 10% date of the term, even for withdrawal for any reason other than military deployment or death of the student.

Grade of I (Incomplete)
A grade of I may be given at the discretion of the instructor if the instructor decides that the student (who has contacted the instructor to request an incomplete) has a legitimate reason for missing the last test, or final project, or final exam, or other assignment. The instructor must make arrangements for the student to make up the work for the final grade(s) within the time allowed for completion of incompletes (by the fifth week of the following semester). A grade of I will automatically revert to a grade of F unless the work is made up and a Grade Change form is submitted by the instructor. In accordance with the state refund policy for community colleges, there is no tuition refund allowable after the 10% date of the term, even for withdrawal for any reason other than military deployment or death of the student.

Students enrolled in courses offered on schedules other than the standard sixteen-week semester and the regular summer term should consult the Wake Technical Community College Planning Calendar to determine the last day to withdraw and receive a grade of "W. "

In accordance with the state refund policy for community colleges, there is no tuition refund allowable after the 10% date of the term, even for withdrawal for any reason other than military deployment or death of the student. Students who need to withdraw due to medical reasons are advised to review the withdrawal policy.

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.

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, DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, DMA 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.

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

Grade	Per Credit	Explanation
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 Reading and English** 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%)

Students in **Pre-Curriculum Math** courses (DMA or DMS course prefixes) are graded according to the following system.

Grade	Explanation
P	Pass
R	Repeat (maps to a F grade)
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 (Developmental Mat and Cooperative Education Use Only)
R	Repeat (Developmental Math Use 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, 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 enroll in the same course up to three times during his or her academic career. Each attempt will be recorded on the student's official academic record. Grades of NA (never attended) are recorded on the student's official academic record but are not considered a course repetition. The best grade earned in all the attempts is calculated in the GPA. The dean, department head, or designee responsible for the supervision of the course being taken may approve exceptions to this policy.

Beginning with registration for the fall 2013 semester, students will receive a **registration block** on their third attempt to repeat a course. The official course repetition policy is not changing, so students will not be prohibited from enrolling in the course. The registration block will serve as a tool to allow Curriculum Education Services to intervene before a student risks violating the repetition policy. Students who receive a registration block on a third attempt to repeat a course should contact the appropriate department for that course.

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.

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.

ACADEMIC STANDING LEVELS

Warning

If the cumulative GPA of a student is below 2.0 at the end of the spring 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 10 days of the semester to learn about available academic resources and services.

Probation

If the cumulative GPA of a student who is already on academic warning remains below 2.0 at the end of the spring 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 Curriculum Dean of Registration & Student Records 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 Probation/Suspension 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. The Academic Probation/Suspension Success Contract may be obtained from a Student Services advisor or counselor.

Suspension

If the cumulative GPA of a student who is already on academic probation remains below 2.0 at the end of the spring 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 Curriculum Dean of Registration & Student Records 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 online Appeal of Academic Suspension form. 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.

If the appeal is approved, the student must meet with a counselor or advisor to develop an Academic Probation/Suspension Success Contract; the registration hold will then be removed 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 in the Academic Probation/Suspension Success Contract, at any point during the semester, will have his or her 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.

If the appeal is denied, the student must sit out for one semester and follow the reinstatement process as outlined in the following section.

Reinstatement Process for Students Not Appealing Academic Suspension
Students who choose not to appeal their academic standing or whose appeal is denied may request reinstatement for a future term (after sitting out one term of suspension) by submitting an Academic Suspension Reinstatement Plan to the Student Success Department. In order for reinstatement to be considered, students must attend a required Student Success Workshop sponsored by the Student Success 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.

GRADE REQUIREMENTS TO GRADUATE

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.

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.

GRADUATION

Graduation exercises are held at the end of the fall and spring semesters 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.

WE ARE HERE TO HELP!

Location
Registration & Student Records Services
9101 Fayetteville Rd., Raleigh, NC 27603 (401 South - Main Campus)
Student Services Building, Room 243A
Monday-Thursday from 8:00 a.m. - 6:00 p.m.
Friday from 8:00 a.m. - 5:00 p.m.

Phone
919-866-5700

Website
http://www.waketech.edu/student-services/registration-student-records

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

2014 CRITICAL SUCCESS FACTORS

Eight Performance Measures for Accountability

A. Basic Skills Student Progress
Percentage of students who progress as defined by an educational functioning level.

System Goal	System Baseline	Average College Percentage
51.2%	20.6%	41%

Wake Technical Community College		
Total Students	Completing Level	Percent Complete
4,836	1,706	35.1%

B. GED Diploma Passing Rate
Percentage of students taking at least one GED test during a program year who receive a GED diploma during the program year.

Wake Technical Community **College**	**System Goal**	**System Baseline**	**Average College Percentage**
68.3%	82%	49.3%	71.7%

C. Developmental Students Success Rate in College-Level English Courses
Percentage of previous developmental English and/or reading students who successfully complete a credit English course with a grade of "P", "C" or better upon the first attempt.

System Goal	System Baseline
74.9%	45.2%

Wake Technical **Community College**	**# Students**	**# Success**	**% Successful**			
			12-13	11-12	10-11	09-10
	921	476	51.7%	55%	55%	54%

D. Developmental Student Success Rate in College-Level Math Courses
Percentage of previous developmental math students who successfully complete a credit math course with a "C" or better upon the first attempt.

System Goal	System Baseline
75.4%	47.5%

Wake Technical **Community College**	**# Students**	**# Success**	**% Successful**			
			12-13	11-12	10-11	09-10
	1,342	854	63.6%	64%	57%	62%

E. First Year Progression
Percentage of first-time fall credential-seeking students attempting at least twelve hours within their first academic year who successfully complete
("P", "C" or better) at least twelve of those hours.

System Goal	System Baseline
74.6%	53.2%

Wake **Technical Community College**	# Cohort	12 hrs attempted	12 hrs successfully completed	% Successful			
				12-13	11-12	10-11	09-10
	3,339	2,815	2,016	71.6%	67%	67%	50%

F. Curriculum Completion Rate

Percentage of first-time fall credential-seeking students who graduate, transfer, or are still enrolled with 36 hours after six years.

System Goal	System Baseline
45.6%	28.6%

Wake Technical Community College	#	% Graduates			
	Cohort	2007	2006	2005	2004
	2,199	18%	16%	18%	18%

Wake Technical Community College	% Transfer, Not Graduate			
	2007	2006	2005	2004
	21%	20%	16%	19%

Wake Technical **Community College**	% Retained, Not Graduate or Transfer			
	2007	2006	2005	2004
	3%	3%	2%	3%

Wake Technical **Community College**	% Graduate, Transfer, or Retained			
	2007	2006	2005	2004
	42.2%	39%	38%	40%

G. Licensure and Certification Passing Rate

Aggregate institutional passing rate of first time test-takers on licensure and certification exams. Exams included in this measure are state mandated exams which candidates must pass before becoming active practitioners.

System Goal	System Baseline
93.8%	71.2%

2011 – 2012 Licensure and Certification Rate by Exam

BLET				
12 – 13	12 – 13	11 -12	10 - 11	09 - 10
# Tested	% Passed	% Passed	% Passed	% Passed
48	90%	86%	95%	91%

Dental Hygiene				
12 – 13	12 – 13	11 – 12	10 – 11	09 - 10
# Tested	% Passed	% Passed	% Passed	% Passed
11	82%	83%	100%	79%

Massage & Body Work		
12 – 13	12 – 13	11 – 12
# Tested	% Passed	% Passed
17	100	NA

Radiography				
12 – 13	12 – 13	11 – 12	10 – 11	09 – 10
# Tested	% Passed	% Passed	% Passed	% Passed
27	100%	100%	100%	100%

Registered Nursing				
12 – 13	12 – 13	11 – 12	10 – 11	09 – 10
# Tested	% Passed	% Passed	% Passed	% Passed
133	89%	95%	90%	89%

Cosmetology				
12 – 13	12 – 13	11 – 12	10 – 11	09 – 10
# Tested	% Passed	% Passed	% Passed	% Passed
25	84%	95%	NA	NA

Esthetician				
12 – 13	12 – 13	11 – 12	10 – 11	09 – 10
# Tested	% Passed	% Passed	% Passed	% Passed
33	88%	83%	100%	90%

EMT				
12 – 13	12 – 13	11 – 12	10 – 11	09 – 10
# Tested	% Passed	% Passed	% Passed	% Passed
149	90%	90%	94%	92%

EMT - I				
12 – 13	12 – 13	11 – 12	10 – 11	09 – 10
# Tested	% Passed	% Passed	% Passed	% Passed
******	**	83%	86%	92%

EMT - P				
12 – 13	12 – 13	11 – 12	10 – 11	09 – 10
# Tested	% Passed	% Passed	% Passed	% Passed
23	100%	100%	100%	100*

H. College Transfer Performance

Among community college associate degree completers and those who have completed 30 or more credit hours who transfer to a four-year university or college, the percentage who earn a GPA of 2.00 or better after two consecutive semesters within the academic year at the transfer institution.

	30 or More Semester Hours		Associate Degree Recipients	
Wake Technical **Community College**	Students	% ≥ 2.0	Students	% ≥ 2.0
	566	89%	314	92%

	2011 – 2012 Totals			% ≥ 2.00	
Wake Technical **Community College**	Students	# ≥ 2.0	% ≥ 2.0	10-11	09-10
	880	793	90.1%	92%	92%

STUDENT CODE OF CONDUCT, RIGHTS AND RESPONSIBILITIES

I. GENERAL INFORMATION

This section covers student conduct, rights, and responsibilities while pursuing an education at Wake Technical Community College. Wake Tech has specific expectations regarding student conduct. The college is a learning community with the goal of providing a safe and healthy environment that facilitates the Wake Tech mission and promotes the core values of respect, responsibility, communication, collaboration, critical thinking, and accountability.

When a student's conduct adversely affects the learning environment or the pursuit of Wake Tech's educational objectives, action will be taken to first resolve the problem and secondly to assist students in learning from mistakes. Discipline issues will be resolved informally whenever possible.

II. RIGHTS AND RESPONSIBILITIES

The submission of an application for admission to Wake Technical Community College represents a voluntary decision on each student's part to participate in the programs offered by the institution pursuant to its policies, rules, and regulations. College acceptance of the application represents the extension of a privilege to join the college community and to remain a part of it, as long as the required academic and conduct standards are met.

Each student has the privilege of exercising the following rights without fear or prejudice, as long as respect is given to federal and state laws, policies of the college, and the rights of others on campus.

- Students are free to pursue educational goals through appropriate opportunities for learning in the classroom and on the campus. Student performance will be evaluated on an academic basis, not on opinions or conduct matters unrelated to academic standards.
- Students have the right to freedom of expression, inquiry, and assembly without restraint or censorship, subject to reasonable and non-discriminatory rules and regulations regarding time, place, and manner.
- Students have the right to inquire about and to propose improvements to policies, regulations, and procedures affecting their welfare through established student government procedures, campus committees, and college offices.
- Students have the right to expect that their official college records will be safeguarded. The Family Educational Rights and Privacy Act of 1974 (as amended) provides safeguards regarding confidentiality of and access to student records. Students and former students have the right to review their official records and to request a hearing if they challenge the contents of these records. Other than directory information, no records shall be made available to unauthorized personnel or groups inside or outside the college without the consent of the student involved, except under legal compulsion.
- Students have the right to expect a safe environment that ensures the continuity of the educational process.
- Students have the right to appeal academic integrity policy penalties – See Section III.D.
- Students have the right to appeal course grades – See Section III.E.
- Students have the right to grieve student code of conduct sanctions – See Section IV.C.2.
- Students have the right to a fair hearing of alleged grievances – See Section VI.

Likewise, as part of our community, students have certain responsibilities. These include but are not limited to:

- Respecting the rights of others.
- Respecting the highest standards of academic integrity and reporting any violations of those standards to the Dean of Student Development or any other college official for appropriate investigation and disposition.
- Respecting the property of others, and the property, equipment, facilities, and programs of the college.
- Refraining from actions that endanger the health, safety, or welfare of any member of the college community or its guests.
- Complying with the normative standards, rules, and regulations of the college as well as with federal, state, and local laws.

ARTICLE A: DEFINITIONS (AS APPLICABLE TO STUDENT CODE OF CONDUCT, RIGHTS, AND RESPONSIBILITIES)

1. The term “**ACADEMIC INTEGRITY**” refers to all of the academic assignments turned in shall be one’s own work unless otherwise stated by the instructor.
2. The term "**ACCUSED STUDENT**” refers to any student alleged to have violated the College Student Code of Conduct.

3. The term "**APPEAL**" refers to an official request that a currently-enrolled student would make to a faculty member regarding a final course grade or academic integrity sanction given to him/her by the faculty member; or a decision made by the DRGC to the President or committee of appointed trustees.
4. The term "**BOARD OF TRUSTEES**" refers to the group of appointed officials charged with oversight of the college.
5. The term "**BUSINESS DAYS**" refers to all days except Saturday, Sunday and college holidays. When counting days, the day a complaint is received at any point in the procedure shall be considered "day one."
6. The term "**CHEATING**" refers to, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; or (3) the acquisition, without permission, of tests or other academic material belonging to a member of the college community.
7. The term "**COLLEGE**" refers to Wake Technical Community College.
8. The term "**COLLEGE OFFICIAL**" refers to any person employed by the college performing assigned administrative or professional responsibilities.
9. The term "**COLLEGE PREMISES**" refers to all land, buildings, facilities, and other property in the possession of or owned, leased, used, or controlled by the college, including adjacent streets and sidewalks.
10. The term "**COMPLAINT**" refers to an accusation made by a currently-enrolled student who may wish to complain about an issue related to the mission of the college for which there is no formal or established grievance or appeals process, including but not limited to curriculum, class scheduling, registration, financial aid, facilities, or faculty or college official.
11. The term "**COMPLAINANT**" refers to any person who submits a charge alleging that a student violated the Student Code.
12. The term "**DISCIPLINARY REVIEW and GRIEVANCE COMMITTEE**" (DRGC) refers to a judicial body designed to provide due process and participatory justice to students for college incidents which resulted in sanctions or penalties.
13. The term "**DISCIPLINARY REVIEW and GRIEVANCE COMMITTEE CHAIRPERSON**" refers to an individual selected by the Student Conduct Officer to facilitate a Disciplinary Review Grievance Committee.
14. The term "**EDUCATIONAL ASSIGNMENT**" refers to a sanction designed to promote self-awareness of appropriate/inappropriate behavior and awareness of institutional expectations, and to educate the student in the specific area of his or her violation.
15. The term "**FACULTY MEMBER**" refers to any person hired by the college to conduct classroom or teaching activities or who is otherwise considered by the college to be a member of its faculty.
16. The term "**GRIEVANCE**" refers to a complaint about any issue or process that a currently-enrolled student may wish to have addressed, including a disciplinary action placed upon the student by a college official or DRGC.
17. The term "**MAY**" is used in the permissive sense.
18. The term "**MEMBER OF THE COLLEGE COMMUNITY**" refers to any person who is a student, faculty member, college official, or any other person employed by the college. A person's status in a particular situation will be determined by the Student Conduct Officer or designee.
19. The term "**ORGANIZATION**" refers to any group who has complied with the formal requirements for college recognition of sanctions.
20. The term "**POLICIES**" refers to the written regulations of the college as found in but not limited to the college catalog, the college website and web pages, the student handbook, and the computer use guidelines.
21. The term "**PREPONDERANCE OF EVIDENCE**" refers to a standard of proof in which the evidence strongly suggests the code has been violated.
22. The term "**SHALL**" is used in the imperative sense (mandatory).
23. The term "**STUDENT**" refers to all persons taking courses at the college, full-time or part-time, pursuing degree or non-degree programs, including continuing education and distance courses.
24. The "**STUDENT CONDUCT OFFICER**" refers to the college official charged with the responsibility of administering the college's Student Code of Conduct.
25. The term "**VICTIM**" refers to any person who is acted on and usually adversely affected by a force or agent.
26. The term "**WITNESS**" refers to one that gives evidence; a person who is present at an event and can speak to what happened.

III. ACADEMIC INTEGRITY POLICY

A. **Expectations**

When college officials award course credits, degrees, diplomas, and certificates, they assume integrity on the part of the student who has completed the work. Wake Technical Community College expects students to demonstrate the highest personal integrity in all academic work and behavior. Effective education depends on an atmosphere that is conducive to learning, based on a commitment to honesty, trust, fairness, respect, and individual responsibility. Creating such an atmosphere is the responsibility of students and instructors and requires integrity on the part of both. Students may be asked to sign a statement of academic integrity upon entering Wake Tech classes.

Cheating and plagiarism, as defined below are forms of academic dishonesty that violate the integrity of the academic process.

B. **Violations of the Academic Integrity Policy**

1. **Cheating**, including:
    a. receiving, giving, or helping another student receive or give any information during a quiz, test, examination, or individual assignment;
    b. using unauthorized materials or equipment during a quiz, test, or examination, e.g., notes or books;
    c. communicating the subject matter or contents of a quiz, test, or examination to another student unless specifically authorized by the instructor to share it;
    d. taking a quiz, test, or examination for another student;
    e. obtaining quiz, test, or examination questions beforehand;
    f. tampering with the grading of a quiz, test, or examination; or
    g. working with others in completing take-home quizzes, tests, examinations, or individual assignments unless the instructor specifically authorizes collaborative work.

2. **Plagiarism**
   Plagiarism is stealing, or passing off as one's own, the ideas or words of another person. When students present others' words or ideas in a written assignment, they must document the source(s), as described in the MLA Handbook or as directed by the instructor of the course. Plagiarism also includes:

    a. having another person write a paper and submitting it as one's own;
    b. copying all or part of a paper from another student or another source, such as the internet; or
    c. allowing another person to copy one's work.

3. Buying, selling, stealing, or soliciting any materials purported to be unreleased contents of a forthcoming examination, quiz, test, or project/assignment or the use of such material.

4. Substituting for another person in any of the above-mentioned situations or allowing another person to substitute for oneself.

5. Collusion with another person in the preparation or editing of assignments submitted for credit, unless such collaboration has been approved in advance by the instructor.

6. Knowingly furnishing false information to the college; forgery, alteration and or use of college documents or instruments of identification with the intent to defraud.

C. **Academic Penalties**
The following academic penalties may be imposed by an instructor, a department head, or a division dean for violation of the Academic Integrity Policy.

1. **Loss of Grade:** A zero for the assignment

2. **Loss of Credit:** An "F" for the course and loss of rights to attend the remaining class sessions.

Written notice of any academic penalty must be submitted on an Academic Integrity Reporting form to a student conduct officer for appropriate recordkeeping.

D. **Academic Penalty Appeal Procedures**

1. A student who wishes to appeal an Academic Integrity Violation penalty must initiate the appeal process with the instructor **within 3 business days** of the communication of the penalty to seek resolution. To initiate the appeal, the student must use the Academic Appeal Form. The instructor will review the matter and contact the student within 5 business days with a decision.

2. If the student wishes to appeal the instructor's resolution, the student must submit an Academic Appeal Form to the department head **within 2 business days** of receiving the instructor's response. The department head will review the matter and contact the student **within 5 business days** with a decision.

3. If the student wishes to appeal the department head's resolution, the student must submit the Academic Appeal Form to the division dean **within 2 business days** of receiving the department head's response. The division dean will review the matter and contact the student **within 5 business** days with a decision.

4. If the student wishes to appeal the division dean's resolution, the student must notify a student conduct officer **within 2 business days** of receiving the division dean's decision that he or she would like the matter reviewed by the Disciplinary Review and Grievance Committee (DRGC).

5. The conduct officer will forward all documents to the DRGC Chair and contact the student **within 5 days** to schedule the DRGC committee hearing. The decision of the DRGC will be final and not subject to appeal.

6. At whatever stage the grievance is concluded, either due to amicable resolution or time limitations, all documentation should be maintained by a student conduct officer in accordance with the state records and retention policies.

The College recognizes that under certain circumstances, students may be justified in initiating their appeal at the department head level. Students who choose to communicate their appeal to the department head first, instead of to the instructor, must include the justification for doing so.

E. **Course Grade Appeal Policy**

1. **Faculty Responsibility for Grades**
   A part of faculty responsibility at Wake Technical Community College is the assignment of student grades according to methods that are professionally acceptable, communicated to everyone in the class, and applied to all students equally.

   A student who has a disagreement with an instructor's professional judgment in grading should attempt to resolve the matter through dialogue with the instructor who issued the grade. The college believes that the preservation of the institution's academic integrity requires that the college ordinarily refrain from review of or participation in an instructor's evaluation of student performance in cases where the instructor is merely using his or her professional judgment.

   However, the college acknowledges that, on occasion, exceptional circumstances may arise in which a student should have the opportunity to appeal the grade for a course. When circumstances warrant, a student may make use of the following appeals process.

   In the event the student is contending that the disputed grade was rendered on account of or was influenced by the student's age, race, sex, national origin, religion, or disability, the student must utilize the grievance procedure in lieu of the procedure described below.

2. **Course Grade Appeals Process**

   a. A student who wishes to contest a course grade must initiate the appeals process with the instructor of the course within **fifteen (15) business days** of the posting of that semester's final course grades.
   b. Within **five (5) business days** of the appeal, a student who is unable to resolve the disagreement with the instructor, and who wishes to appeal the grade beyond the authority of the instructor, must complete a Grade Appeal Form, which then becomes the document of record. This form is available from the department head.
   c. Within **five (5) business days**, the department head will decide whether a review of student work is required, and if necessary, the manner by which any such reviews of student work will be performed. The department head will also decide on an appropriate action.
   d. A student who is unable to resolve the disagreement through dialogue with the department head may appeal, within **five (5) business days**, to the academic dean of the division. The academic dean will investigate, and within approximately **five (5) business days**, decide on an appropriate action. The academic dean's assessment will be considered final.

IV. STUDENT CODE OF CONDUCT

Students are expected to conduct themselves in accordance with generally-accepted standards of scholarship and conduct.

STUDENT CODE OF CONDUCT, RIGHTS AND RESPONSIBILITIES

The purpose of the Student Code of Conduct (the Student Code) is not to restrict student freedom but to protect the rights of all students in their academic pursuits.

A. **Prohibited Conduct**
Students are prohibited from engaging in any conduct which materially and adversely affects the educational process, including the following:

1. Violation of the Academic Integrity Policy.

2. Disruption or obstruction of teaching, research, administration, disciplinary proceedings, or other college activities, or other authorized non-college activities, when the act occurs on college premises, whether intentional or unintentional.

3. Attempted or actual theft of, misuse of, or intentional damage to college property; or theft of or damage to property of a member of the college community or a campus visitor on college premises or at college functions.

4. Trespassing, including unauthorized entry or presence on the property of the college or in a college facility or any portion thereof to which entry or presence has been restricted.

5. Violation of the Drug and Alcohol Policy.

6. Lewd or indecent conduct on college premises or at college-sponsored or college-supervised functions.

7. The use of profane, lewd, or obscene speech or like expressive behavior (including the wearing of clothing displaying such language, pictures, or symbols); the use of defamatory or racist speech or like expressive behavior; or the use of any speech or behavior implying a physical threat or likely to provoke violence or retaliation in person or via electronic means, including but not limited to blogs, texting, email, and social networking sites.

8. Mental or physical abuse of any person on college premises or at college-sponsored or college-supervised functions, including, coercion, stalking, intimidation, verbal or physical actions which threaten or endanger an individual's health or safety.

9. Violation of the Sexual Harassment Policy.

10. Occupation, refusal to depart, seizure, commandeering or threatening to do so in any manner of college property, a college facility, or any portion thereof for a use inconsistent with prescribed, customary, or authorized use.

11. Participating in or conducting an assembly, demonstration, or gathering in a manner which threatens or causes injury to persons or property; which interferes with free access to, ingress, or egress of college facilities; which is harmful, obstructive, or disruptive to the functions of the college; remaining at the scene of such an assembly after being asked to leave by a college official.

12. Possession of firearms, fireworks, explosives, incendiaries, knives of any kind, and other types of weapons on college property or at any college function (except by persons college, specifically authorized by the college and in accordance with G.S. 14-269.2).

13. Setting off a fire alarm or using or tampering with fire safety equipment on college premises or at college-sponsored or college-supervised functions, except with reasonable belief in the need for such alarm or equipment.

14. Gambling, including unlawful games of chance for money or anything of value and the sale, barter, or other disposition of a ticket, order, or any interest in a scheme of chance by any name, on college premises, at college-sponsored or college-supervised functions.

15. Smoking and/or use of any forms of tobacco products and e-cigarettes on all properties owned or rented by the college.

16. Violation of state or college regulations regarding the operation and parking of motor vehicles.

17. Tampering with the election of any college recognized student organization, forgery, alteration, or misuse of college documents, records, or instruments of identification with intent to deceive.

18. Failure to comply with instructions of college officials acting in performance of their duties and/or failure to identify oneself to these persons when requested to do so.

19. Violation of the terms of disciplinary probation or any college regulation during the period of probation.

20. Fiscal irresponsibility, such as failure to pay college-levied fines, failure to repay college-funded loans, or the passing of worthless checks to college officials.

21. Violation of any college policy, prohibited behavior, local, state, or federal criminal law on college premises adversely affecting the college community's pursuit of its proper educational purposes.

22. The unauthorized access or attempt to access, manipulation, or retrieval of files, programs, or data from any college computer system. Use of computing facilities to send or view obscene or threatening messages.

23. Disruption, disturbance, or interference with any classroom activity or staff operation by the playing of loud, threatening, or obscene music.

24. Engaging in any action that is disruptive to orderly classroom instruction without limitations to the use of cell phones, (tablets, or electronic devices; students are therefore required to disengage all such devices when not approved for instruction in a classroom).

25. Engaging in any action that is disruptive or in violation of established rules and regulations regarding use of college areas, including but not limited to computer labs, library, ILC, student lounges, designated public transportation, and cafeteria.

26. Willfully encouraging others to commit any of the acts that have been herein prohibited.

27. Hazing of any individual or organization is defined as an act which endangers the mental or physical health or safety of a student, or which destroys or removes public or private property, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in, a group or organization.

28. Stalking- Engaging in a pattern of unwanted conduct directed at another person that threatens or endangers the safety, physical or mental health, or life or property of that person, or creates a reasonable fear of such a threat or action.

B. **Disciplinary Penalties for Violations of the Student Code**

The following disciplinary actions may be imposed by an instructor or college official for violation of the Student Code. A copy of any written warnings or reprimands must be forwarded to a student conduct officer for appropriate recordkeeping.

1. **Admonition:** A warning to the student that the behavior is unacceptable and that if the pattern of behavior continues, the student will face disciplinary action up to and including suspension from the college. Verbal warnings will be documented by the instructor or college official and included as evidence in the event of subsequent violations.

2. **Reprimand:** A written communication which gives official notice to the student that a violation of the Student Code has occurred and that any subsequent violation of the Student Code may carry heavier penalties because of this prior infraction.

3. **Emergency (Interim) Suspension:** Instructors or college officials may impose interim suspension for conduct that poses a threat to the health or well-being of any member of the academic community or the activities of the college.

    a. Interim suspension will not exceed more than two class periods. Instructors must notify their department head or next ranking available supervisor immediately upon suspending a student.
    b. A completed Student Code Violation form must be submitted electronically to the appropriate Student Conduct Officer within 24 hours of the suspension. The form is available online at https://secure.waketech.edu/eaglesnest/, under the heading Forms, sub-heading Student Services Forms.

c. Any student who receives an interim suspension must meet with a student conduct officer or designee prior to returning to class.
d. If class readmission is approved, the student conduct officer will give the student a class readmission notice. Instructors who have not received notification of a suspended student's return to class may deny entry until such notification is received.

The following disciplinary actions may be imposed only by the Disciplinary Review and Grievance Committee (DRGC), Vice President of Student Services, Student Conduct Officer, or Registrar when applicable:

1. **Educational Assignments:** Educational sanctions may include work assignments, essays, community service, behavioral contract and other related educational assignments.

2. **General Probation:** An individual may be placed on general probation when involved in a substantive disciplinary offense. General probation has two (2) important implications: 1) the individual is given a chance to show capability and willingness to observe the Student Code without further penalty; and 2) if the student errs again, additional sanctions will be imposed for this violation. This probation will be in effect for no more than two (2) terms.

3. **Restrictive Probation:** Restrictive probation results in loss of good standing, and notation of such is made in the individual's conduct record. Restrictive conditions may limit activity in the college community and/or access to specified college facilities. The individual will not be eligible for initiation into any local or national organization, and may not receive any college award or other honorary recognition. The individual may not occupy a position of leadership or responsibility with any college or student organization, publication, or activity. This probation will be in effect for not less than two (2) terms. Any violation of restrictive probation may result in immediate suspension.

4. **Restitution:** Paying for damaging, misusing, destroying, or losing property belonging to the college, college personnel, or students.

5. **Delayed Registration:** A student may be required to meet with a Student Conduct Officer before registering for classes if the student has not complied with a sanction or contacted the Student Conduct Officer as required.

6. **Revocation of Admission and/ or Degree:** Admission to or a degree awarded from the College may be revoked for fraud, misrepresentation, or other violation of College standards in obtaining the degree, or for other serious violation committed by a student prior to graduation.

7. **Agreed-Upon Behavior Contract:** In situations where a student and the Student Conduct Officer can agree on the consequences that should result from the student's Code of Conduct violation, the agreed-upon consequences can be set out in a document titled "Behavior Contract."

8. **Withholding:** Transcript, diploma, or right to register will be withheld (denied) when financial obligations are not met.

9. **Suspension:** Exclusion from a class, program of the college, or all college activities for a specified period of time. This sanction is reserved for those offenses warranting discipline more severe than probation, or for repeated misconduct. Students who receive this sanction must get specific written permission from a student conduct officer before returning.

10. **Expulsion:** Dismissing a student from campus for an indefinite period. The student loses his/her student status.

11. **Group Probation:** This is given to a college club or other organized group for a specified period of time. If group violations are repeated during the probationary period, the group's charter may be revoked or activities restricted.

12. **Group Restriction:** Removing college recognition during the term or semester in which the offense occurred or for a longer period (usually not more than one additional term). While under restriction the group may not seek or add members, hold or sponsor events in the college community, or engage in other activities as specified.

13. **Group Charter Revocation:** Removal of college recognition from a group, club, society, or other organization for a minimum of two years. Re-charter after that time must be approved by the Vice President of Student Services.

Other than College probation, suspension, expulsion, revocation or withholding of a degree, disciplinary sanctions shall not be made part of the student's permanent academic record, but shall become part of the student's disciplinary record maintained by the Student Conduct Officer.

B. **Disciplinary Procedures for Violations of Student Code**

1. **Instructor or College Official**
When an incident takes place in which a student is alleged to have violated any portion of the Student Code, the reporting instructor (or other college official) must follow these steps:

   a. For a minor violation, the student should be given a verbal warning.
   b. For a violation that is not minor or for a subsequent violation, the student should be given a written reprimand and referred to a Student Conduct Officer (or designee).
   c. The instructor or official must report the violation and the action taken on the appropriate form within two (2) business days of the incident. The report should be submitted electronically to the appropriate Student Conduct Officer and department head. Both forms are available online at https://secure.waketech.edu/eaglesnest/
   d. After giving verbal and written warnings and referring the student to the Student Conduct Officer, the instructor or official may impose an interim suspension – if the student behavior is violent or if the disruption creates an atmosphere in which classroom instruction cannot continue. An interim suspension may not exceed two class periods, and the instructor must notify the department head, division dean, or college official immediately upon imposing suspension.
   e. The student must meet with the Student Conduct Officer and may not return to class until that meeting has occurred. The Student Conduct Officer will give the student a form authorizing return to class.
   f. The Student Conduct Officer will notify the student, instructor, and department head in writing of any disciplinary action taken.

2. **Student Code of Conduct Sanction Grievance Procedures**
If the student wishes to grieve the Student Code of Conduct Sanction given by a Student Conduct Officer or instructor, the student may request a hearing with the Disciplinary Review and Grievance Committee (DRGC). Request for a hearing must be made using Student Conduct Grievance Request within fifteen (15) business days after the sanction is issued. The form can be accessed by clicking on the following link: Student Conduct Grievance Request Form.

   a. The Disciplinary Review and Grievance Committee is a judicial body designed to provide due process and participatory justice to students for college incidents which resulted in sanctions or penalties. Whenever possible, a student conduct officer will attempt to resolve the problem informally.
   b. Composition of the DRGC: The committee is composed of three members, each of whom may serve up to two years – a student in good standing academically and otherwise, a staff member, and a faculty member – plus a Presiding Chairperson, who will serve a two-year term.
   c. Powers and functions of the DRGC: The committee may confirm, deny, or modify the student code violation sanction. The decision of the Committee is final except in cases of alleged discrimination or denial of due process.
   d. Role of the DRGC Committee Chair:

      i. The Chair will not be a voting member of the Committee and will intervene in proceedings only to advise on points of order and procedure.
      ii. The Chair is expected to make electronic recordings of the hearing, which will be maintained in the office of the Student Conduct Officer.
      iii. The Chair will be responsible for delivering the recommendations of the DRGC to the office of the Senior Vice-President of Student Services within two (2) business days.

   e. In DRGC hearings, the Student Conduct Officer's only role is to inform students of their rights and responsibilities in seeking to resolve differences and disputes.

f. Meeting date and time: The DRGC will meet on Thursday afternoons or as announced to hear scheduled cases. DRGC members will be notified 24 hours in advance if there are cases to be heard.

V. OTHER COMPLAINTS

Concerns involving harassment or discrimination by a college faculty member or staff member on the basis of race, color, religion, sex, sexual orientation, age, national origin, disability, or veteran status should be directed to the college's affirmative action officer and or Title IX officer.

Currently-enrolled students may wish to complain about an issue related to the mission of the college for which there is no formal or established grievance or appeals process, including but not limited to curriculum, class scheduling, registration, financial aid, facilities, or faculty. In accordance with federal consumer information and accreditation requirements, all units that receive and resolve such complaints will maintain a log of the complaints and their resolution. In such cases, the student should follow the procedures below:

1. The student should submit a Student Complaint Form.
2. The complaint form will be routed to the Senior Vice President for Student Services and assigned to the appropriate administrator, based on the nature of the complaint.
3. The assigned administrator will follow up with resolution to the complaint within 5 business days.

VI. DISCRIMINATION AND DUE PROCESS

A. **Definition of Discrimination**
Discrimination is the unlawful and intentional act of unfair treatment of a person based on race, ethnicity, sex (gender), sexual orientation, religion, national origin, physical or mental disability, or age.

B. **Definition of Due Process**
A Disciplinary Review and Grievance Committee shall guarantee the student the following basic due process procedural rights:

1. The right to present relevant evidence and witnesses in his or her defense.
2. The right to a hearing before an impartial Disciplinary Review and Grievance Committee.
3. The right to know the identity of the person(s) bringing the charge(s) against him or her.
4. The right to hear the evidence against him or her and the right to cross-examine witnesses against him or her.

C. **Avenues of Action**

1. The instructor or college official meets with the student to discuss charges and may issue a warning depending upon the severity of the infraction within five (5) business days of the violation.

2. If a subsequent incident takes place or if the infraction threatens the safety of the instructor or other students, the instructor may impose an interim suspension from the class and submit a Student Code Violation Report to the Student Conduct Officer or designee within two (2) business days. The instructor must also notify his or her department head and dean immediately of an interim suspension. The interim suspension should not last longer than two class periods.

3. The Student Conduct Officer or designee will meet with student within three (3) business days to discuss charges and make a determination to impose a sanction if warranted. The sanctions are as follows:

   a. General probation
   b. Restrictive probation
   c. Restitution
   d. Withholding Academic Records
   e. Suspension
   f. Expulsion
   g. Group Probation
   h. Group Restriction
   i. Group Charter Revocation

4. If student is not satisfied with the sanctions imposed, the student is to file an appeal by completing a Student Conduct Grievance Request within fifteen (15) business days after the sanction is imposed.

5. A hearing with the DRGC will be scheduled within five (5) business days of the submission of the Grievance Request. Student notification will be given in person or by phone, through college-issued email account, or through certified mail to the last address provided, at least five (5) business days before a scheduled hearing.

6. Decision of the DRGC is final except for cases of discrimination on the basis of age, sex, race, national origin, religion, or disability; and for cases in which student contends that procedural due process was denied. Notification of the decision will be forwarded to the student within five (5) business days of the DRGC decision. Official notification will be sent from the Senior Vice President to the student regarding the decision rendered. Grievances may not be heard by the President or the Board of Trustees if related to individual grades or the result of reported disciplinary action.

7. A grievance based upon alleged discrimination (on the basis of age, sex, race, national origin, religion, or disability) or denial of due process may be further directed to the appropriate Senior Vice President (SVP of Curriculum for academic violations, and SVP of Student Services for violations of the Student Code).The senior vice president will review the grievance to determine if discrimination occurred or due process was denied. If the senior vice president agrees that it qualifies under the above-mentioned definitions, the student shall follow the steps outlined below:

    a. **Appeal to the President**
    A student may appeal a decision of the DRGC by submitting a written request for such appeal to the President within three (3) business days of receipt of the Senior Vice President's decision.

    The request should describe in detail all reasons or bases upon which the student contends that the decision of the DRGC is erroneous. After an appeal has been made to the President, the college will, within approximately twenty (20) business days of receipt of the appeal, cause the recording of the evidentiary hearing before the DRGC to be transcribed and copies of such transcript to be distributed to the President. The President may affirm, remand, modify, or reverse the decision or the findings of the committee. Within approximately twenty (20) business days of receiving the transcript, the President shall send the student his decision by certified mail, return receipt requested.

    b. **Appeal to the Board of Trustees**
    A student who disagrees with the decision of the President may appeal the ruling to a committee of trustees appointed by the Chairman of the Board of Trustees. This committee will serve as the final administrative authority.

    To initiate this final step of the grievance process the appeal must be made in writing within fifteen (15) business days after the date the President's determination is mailed to the student and must be addressed to the Secretary, Board of Trustees of Wake Technical Community College, 9101 Fayetteville Road, Raleigh, North Carolina 27603.

    After an appeal has been made to the full Board of Trustees, the College will, within ten (10) business days of receipt of the appeal, cause copies of the recording of the evidentiary hearing before the Disciplinary Review and Grievance Committee to be distributed to the student or to his or her legal counsel and to each member of the Board of Trustees. At a time designated by the Chairman of the Board, within approximately fifteen (15) business days after the notice to the parties, the full Board of Trustees will endeavor to meet in closed session to consider the appeal. At such meeting, the student or his or her attorney, the President, and the President's legal counsel or delegate will be permitted to appear before the full Board of Trustees in Executive Session and to present a summary argument of not more than fifteen (15) minutes in length relating to the merits of the appeal. At the conclusion of these arguments, the full Board of Trustees will excuse the parties and those who presented the summary arguments (except the Board's legal counsel), and continuing in closed session, the Board will then act to sustain, reverse, or modify the actions of the President. The Board may postpone, adjourn, and reconvene the meeting as often as it deems desirable to discuss and consider the evidence and to accommodate the schedules of the members. Within approximately ten (10) business days after the full Board of Trustees has concluded its deliberations on the appeal, the Board will notify the parties by mail of its determination. The decision of the full Board of Trustees is final, except as otherwise expressly provided by law.

VII. ATTORNEY INVOLVEMENT IN PROCEEDINGS

A. **Student Initiation**
A student may engage legal counsel, for advising only, at any point in his or her disciplinary, academic appeal, or grievance proceeding. The student must give advance notice (24 hours) of his or her decision to engage counsel.

B. **College Initiation**
The DRGC or a college official may elect to be advised by legal counsel at any time in any disciplinary, academic appeal, or grievance proceeding.

C. **Staff/Faculty Initiation**
Any staff or faculty member involved in any disciplinary, academic appeal, or grievance proceeding may avail themselves of legal counsel, at their expense, as they see fit. The college attorney is not automatically bound to represent any individual staff or faculty member.

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

STUDENT SERVICES VISION, VALUES, AND MISSION

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

Our **mission** is to advance the overall mission of the college by providing programs and services that foster academic success, student development, and campus community.

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 Perry Health Sciences Campus (Health Education Building 2) , Western Wake Campus (2nd floor) and the Public Safety Education Campus.

When using the Wake Tech Student Centers:

Keep noise of all kinds to a minimum.

- Talk quietly
- Use earphones for electronic devices
- Do not play musical instruments unless authorized for a special event

Help to keep centers clean and accessible for all.

- Place trash and recyclables in appropriate receptacles
- Do not move furniture or tamper with equipment not designated for student use

Respect yourself and others.

- Wear appropriate clothing, including shirts and shoes
- Refrain from profane or obscene language and behavior
- Do not engage in violent or aggressive behavior of any kind, including hitting, wrestling, play fighting, or throwing objects

Failure to comply with the guidelines above will result in the loss of student center privileges for one week. A second offense will result in loss of privileges for one semester.

PUBLIC TELEPHONES

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.

LOST AND FOUND

The purpose of this policy is to provide a standard procedure for the storage and disposal of lost or unclaimed items on the premises of Wake Technical Community College. Whenever possible, the owner of such items will be contacted first.

The following guidelines apply:

- Any lost or unclaimed item deemed unsafe or unsanitary will be discarded immediately.
- Food and other perishable items, lunch bags, and thermoses will be discarded after 24 hours.
- ID cards and credit or debit cards will be shredded and discarded after 48 hours.

No lost or unclaimed items will be held longer than 30 days. After 30 days:

- Clothing, backpacks, and other personal items will be donated to charity.

- Cell phones and other personal electric devices will be recycled.
- Cash will be returned to the person who turned it in or deposited in the student activities account.
- Items valued at more than $200 (laptops, purses, jewelry, tec.) will be recorded in a log and locked in a secure storage area accessible only to an authorized WTCC employee. Items may be reclaimed only by someone providing identification and proof of ownership.

"Lost and Found" repositories are located in the reception areas on most campuses, with these exceptions: Main Campus repository is in the Student Services Building room 128; the Northern Wake Campus repository is located in Building D, room 206-B.

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.

Visit http://www.waketech.edu/student-life/student-government-association to learn more about Wake Tech's SGA.

CLUBS AND ORGANIZATIONS

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 on Main Campus.

A complete listing of clubs is available online at http://studentactivities.waketech.edu/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 Director of Student Activities. The application period for establishing a new organization is spring semester; applications received during the fall semester will be considered for approval for the following academic year. 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 Student Development.

- The organization must receive approval from the Director of Student Activities, the Dean of Student Development, the Senior Vice President of Student Services, and the President of the College before becoming an official college organization

ATHLETICS

The mission of Wake Tech's athletics program is to enhance the college experience for all students by promoting fitness, building awareness of the importance of lifelong physical activity, and developing character and leadership ability through athletic activities and events. Wake Tech encourages all students to participate in athletics, develop athletic skills and abilities, and strive to realize their full potential.

The program offers high-quality instruction and support services with the collaborative efforts of faculty, staff, administration, trustees, and the community. Wake Tech offers equal opportunity for all in compliance with the regulations of Title IX and adheres to an established code of conduct for all athletes and program participants.

Wake Tech is a proud member of the National Junior College Athletic Association (NJCAA), Region X.

Support Wake Tech athletics: Become an Eagle Club member! Learn more at athletics.waketech.edu.

OFFICE OF VOLUNTEERISM AND STUDENT LEADERSHIP (O.V.A.L.)

The Office of Volunteerism and Student Leadership is designed to provide students with the knowledge, skills, and opportunities to serve their communities. The office has an overarching goal of helping students become active local and global leaders by promoting the college's core values of accountability, responsibility, and collaboration through service and leadership training.

O.V.A.L. aims to provide service opportunities for the campus community and partners with various community agencies: Habitat for Humanity, the Wilmington Street Men's Center, Food Bank of Central & Eastern Carolina,

Wake County Public Schools, United Way, STOP HUNGER NOW, and Interfaith Food Shuttle, to name a few. Volunteer opportunities can be found through the O.V.A.L. website or OrgSync.

The Nest is the newest addition to the O.V.A.L. We are proud to offer this service to our students who may be experiencing what the USDA defines as "food insecurity": *consistent access to adequate food is limited by a lack of money and other resources at times during the year."* Food insecurity is the most broadly-used measure of food deprivation in the United States.

O.V.A.L. also offers a variety of leadership training and development programs for students, including Student Leadership Challenge; The National Society of Leadership and Success, Leadership Triangle-College Edition, sponsored by Research Triangle Foundation, and the Student Leadership Development Program, sponsored by NC Community College Presidents and the NC Community College System Office. All curriculum students are eligible for these leadership programs.

O.V.A.L is located on Wake Tech's Main Campus, in Room 128 of the Student Services Building. For more details about our programs, please visit our website.

PATHWAYS MINORITY MALE MENTORING PROGRAM

The mission of the **Pathways Minority Male Mentoring Program (Pathways 3MP)** is to increase the success of minority male students at Wake Tech in the areas of academic growth, retention, and graduation.

Pathways 3MP was developed in partnership with the NC Community College System office and Wake Tech students, faculty, and staff. The program is a support group of academic peers working together, along with program staff, to foster and nurture educational excellence and success among minority male students. Students are encouraged to embrace leadership and to serve as positive role models for each other through strong commitments to academic achievement, brotherhood, and service.

Pathways 3MP offers exceptional mentoring support – academic, social, and career-based. In addition, students are exposed to personal and educational enrichment opportunities that include inspirational seminars, academic workshops, statewide conferences, volunteer service at a local shelter for homeless men, and tours of four-year colleges.

Program staff are located in the Student Services Building, Room 128, on Main Campus, but they provide services at other Wake Tech campuses as well. Main office hours are Monday-Friday from 8:30 a.m. to 5:30 p.m.

For more information, visit http://pathways.waketech.edu/index.php or call 919-866-5507.

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

FEES & PAYMENT

Effective July 1, 2014 and subject to change
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. WebAdvisor may be unavailable for weekly scheduled maintenance between Thursday, 8 a.m. through Friday, 8 a.m..
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 $ 1152.00 /term
Less than 16 credit hrs. $ 72.00 /credit hr.

Out-of-State Students
16 credit hours or more $4,224.00 /term
Less than 16 credit hrs. $264.00 /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*.
*International Students are charged a $30 application fee.

Student Activity Fee
$32.50 per semester (applies to fall and spring semesters only)

Campus Access Fee
Charged per semester during registrations at Main, Health, Western Wake, Northern Wake, or Public Safety Education Campuses:

- $50.00 per term during fall and spring semesters
- $25.00 per term during summer semester

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 the final term)
$35.00 for Diploma/Degree Student
*No charge for Certificate Programs

Official Transcript Fee
$5.00 each per request

Music Fee
$240 per course for MUS 161, MUS 162, MUS 261, MUS 262

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 Fee - 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 Fee - 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
Effective July 1, 2013, senior citizens age 65 and older are required to pay for tuition and fees for **all** community college classes.

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.

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

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 Perry 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.

COLLEGE ID

Students
A college ID card (student photo identification card) will be provided to each registered student and must be carried by the student at all times. Students on all campuses (Main, Northern Wake, Perry Health Sciences, Western Wake, and Public Safety Education) must obtain a current semester validation sticker that will be affixed to their ID cards (effective Fall 2010). Semester validation stickers can be obtained at various locations on each campus.

The card is required for using campus services and attending campus functions, and it serves as a library card. Campus security or any college official may ask a student for his or her 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 the campus unless their purpose can be substantiated by a college official. The initial college ID card will be free; a duplicate will cost the student $5.00.

College ID Office Hours of Operation*
***Note:** The college reserves the right to change days and times of availability as needed.

Main Campus
8 a.m.-5 p.m., Monday-Friday

Northern Wake Campus
8 a.m.-7 p.m., Monday-Thursday
8 a.m.-5 p.m., Friday

Perry Health Sciences Campus
8 a.m.-5 p.m., Monday-Friday

Western Wake Campus
8 a.m.-1 p.m., Monday-Friday (Closed during curriculum class breaks)

Public Safety Education Campus
8 a.m.-4:30 p.m., Monday-Friday

ACADEMIC ADVISING

Wake Tech employs professional Academic Advisors, Student Success Counselors, and Faculty Advisors to provide students with the most effective guidance possible as they pursue academic and career goals.

Students are responsible for planning their programs of study, with the assistance of their assigned advisor or counselor, including

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 appropriate advisor or counselor at pre-registration periods and other times as needed

College/University Transfer Students in the A.A., A.F.A., A.S., or A.S: Engineering programs are assigned to either an Academic Advisor or a Student Success Counselor. Academic Advisors and Student Success Counselors are available on a walk-in basis to assist students with program requirements, course planning, and career goals.

Associate in Applied Science (AAS) Students in degree, diploma, or certificate programs see an Academic Advisor or Student Success Counselor for assistance in their first semester; after that, each AAS student will see an assigned Faculty Advisor. Faculty Advisors are available during regularly-scheduled office hours.

STUDENT SUCCESS

The Student Success Department provides an array of resources and services to support students in setting and attaining academic and career goals.

- **First Year Experience:** Student Success Counselors provide a structured program of services for select first-time-in-college students. Services include academic advising, career exploration and goal-setting, and other activities targeted at engaging new students.

- **Academic Success Counseling:** Student Success Counselors help students address academic difficulties such as low grades, poor study habits, and test anxiety. They also assist students with general problem solving and with the challenges of balancing college, work, and family. Student Success Counselors may also refer students to other academic support services on campus as appropriate.

- **Workshops:** Workshops are offered on stress management, test anxiety, time management, improving academic success, practical college survival strategies, and many other topics.

Locations and Hours

Main Campus: Student Services Building, Room 137
8 a.m.-6 p.m., Monday-Thursday
8 a.m.-5 p.m., Friday

Northern Wake Campus: Building A, Room 223
8 a.m.-6 p.m., Monday-Thursday
8 a.m.-5 p.m., Friday

Perry Health Sciences Campus: Health Sciences Building 2, Room 110
8:00 a.m.-5:00 p.m., Monday-Friday

For More Information
919-866-5460

WORK-BASED LEARNING (formerly Cooperative Education)

Website: http://wbl.waketech.edu
Wake Tech provides workplace learning opportunities for approved students enrolled in select programs. Work-Based Learning is an educational program that combines classroom instruction with paid, supervised work experiences directly related to student's curricula.

The college does not guarantee employment to any student or employees to any employer. The college reserves the right to add, remove, or alter the work-based learning component in any curriculum, as needed.

CAREER AND EMPLOYMENT RESOURCES

Website: http://careers.waketech.edu

Wake Tech's Career and Employment Resources Division helps students and alumni become productive members of the global community. At the same time, the division provides insights into the world of work that help Wake Tech in developing relevant education and workforce training.
Career and Employment Resources serves curriculum education students seeking employment: current students interested in part-time, temporary, or summer jobs; new graduates; and Wake Tech alumni. The division manages College Central Network, the official job posting board for students and alumni, and coordinates all employer and military recruiting on campus as well as other career events. Career and Employment Resources supports the development of relationships between curriculum programs and employers and the creation of employment opportunities for students and graduates.

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

LIBRARIES

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

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
Perry 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		

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)

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.

INDIVIDUALIZED LEARNING CENTER (ILC)

All Wake Tech students and employees have access to the free tutorial services offered by the college's Individualized Learning Centers.

The purpose of the Individualized Learning Centers is to provide supplemental learning opportunities aimed at improving student success. ILC services include the Writing /Study Skills Center, the Math/Computer Center, and the Health Sciences Center. Professionally-prepared tutoring faculty assist through one-on-one tutoring, a collection of audio/video and other media tutorials, and course-related printed materials. Workshops and small group activities tailored specifically for WTCC classes are also available.

Challenge exams for a limited number of Wake Tech courses are available with proper photo identification and pre-approved paperwork from the appropriate academic department. The ILC also offers a self-paced, independent study tutorial program for proficiency in high school-level chemistry. This program was designed to meet the admission requirements for certain Wake Tech Health Sciences Curriculum Education (for-credit) programs. It also satisfies the "CHM 090 or equivalent" prerequisite for some approved biology and chemistry Curriculum Education courses. It is offered online and carries no college credit or transfer options.

ILC services are available at five campus locations (see below). All ILC users must present a valid Wake Tech ID to register and use the timekeeping system. E-tutoring is available through CompuTutor, the Virtual Writing Center, and Smarthinking

ILC CAMPUS LOCATIONS

Main ILC, Room 113 9101 Fayetteville Rd. Raleigh, NC 27603 919-866-5276	Northern Wake Building B, 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	Perry Health Sciences ILC Building 2901 Holston Lane Raleigh, NC 27610 919-747-0233

Hours may vary within each skills center. Please call ahead to check availability.

ILC website, http://ilc.waketech.edu.

DISABILITY SUPPORT SERVICES (DSS)

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 or by Sorensen Video Phone (919) 324-1508.

ONLINE LEARNING

Wake Technical Community College offers Curriculum Education (for-credit) students two options for online learning: Internet courses and hybrid courses. These alternatives to traditional, seated classes allow students to take courses when convenient to their schedules. Each course is taught by a qualified and competent instructor who develops the course to achieve learning outcomes comparable to those in a traditional, seated class. The instructor provides a syllabus and course guidelines and serves as a resource for the students. Costs, credit hours earned, and support services provided are the same as for traditional courses. Students interested in taking online courses should visit the Online Learning website, http://online.waketech.edu/.

Internet Courses
Students in Curriculum Education Internet courses may be invited to an orientation session or other meetings on campus, but all coursework is completed online through Wake Tech's Blackboard server, http://dist-ed.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://www.waketech.edu/student-services/online-learning/students/preview-courses.
2. Participate in the online student orientation: http://www.waketech.edu/student-services/online-learning/students/orientation.
3. Review the information posted on the Online Learning website: http://www.waketech.edu/student-services/online-learning.
4. Take the self-assessment titled "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: http://www.waketech.edu/student-services/online-learning/students/preview-courses
2. Review the information posted on the Online Learning website: http://online.waketech.edu/.

Students in Curriculum Education Internet and hybrid courses must complete the Course Entry Quiz during the first 10% of the course. The quiz can be found on the course's Blackboard site on the first day of class. Students who fail to complete the quiz within the required time frame will be immediately marked as "NA" (Never Attending) and dropped from the class.

Testing Centers
Internet and hybrid course instructors may require students to take tests on campus in a proctored environment. Distance Education Testing Centers are located on the Main, Northern Wake, Western Wake, and Perry Health Sciences campuses. Students must present a valid student identification badge, driver's license, or passport prior to taking a test. For additional information, visit the Distance Education Testing Center's web page at http://www.waketech.edu/student-services/online-learning/students/testing-center or call 919-335-1071.

Library Resources
Students enrolled in online courses have access to all Wake Tech libraries. The library website, http://www.waketech.edu/student-services/libraries, is available to all students and provides information on electronic and print databases, interlibrary loans, loan periods, and hours of operation. The website also has links that provide access to other libraries, resources, search engines, and services such as NC LIVE.

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

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.

CHANGES TO CURRICULUM, FEES, AND OTHER POLICY CHANGES

The Board of Trustees and 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 their control, notwithstanding any information set forth in this catalog.

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 the student portal http://my.waketech.edu.

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.

OFFICIAL COMMUNICATION WITH STUDENTS (E-MAIL)

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.

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 Website
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 by or external services approved by Wake Tech’s Information Technology Services Division.

Blogs
Blogs may be provided to certain entities upon request. All blog websites 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 Digital Communications Specialist in the Communications Division, who will assist with establishing an account and record the employee's username and password. A college employee will be responsible for maintaining the service and may contact the Digital Communications Specialist for assistance as needed. The Digital Communications Specialist will maintain account records in case content needs review or someone other than the original user assumes responsibility for the service.

External Websites
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 websites 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.

STUDENT DRESS AND HYGIENE

Students are not allowed in any campus facility without shoes and shirts. Caps and hats should not be worn in any classroom. Underclothing must not be visible.

In addition, students must meet the specific dress requirements of their programs of study, including uniforms or personal protective equipment such as goggles, shields, etc., required in laboratory and shop settings. Students in violation of dress policies may be subject to corrective action, including removal from the setting.

Students' overall personal appearance must reflect cleanliness and good grooming. If a student's dress or hygiene interferes with the learning process, the student's instructor will counsel the student. Repeat offenses will result in referral to the Dean of Students.

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.

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.

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
Perry Health Sciences Campus: January 1, 2008
Plastics Center in Zebulon: January 1, 2008
Public Safety Education Campus: 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.

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.

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

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.

SKATE BOARDING/ROLLERBLADING
Skate boarding and rollerblading are not allowed on any Wake Technical Community College campus or site.

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 Student Development. 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 Student Development.

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 with regard to race, sex, or creed, grammatically incorrect statements, and misspelled words will be subject to disapproval. 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 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 staying 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/ or distributed through the electronic newsletter, which is sent to all currently-enrolled students.

This policy does not apply to off-campus groups and individuals. Off-campus groups and individuals are allowed to distribute publications in the designated areas of the Main Campus and the Northern Wake Campus in accordance with Wake Tech's solicitation policy. Requests for distributions on the Main Campus require the approval of the Dean of Student Development and requests for the Northern Wake Campus require the approval of the Sr. Dean of Strategic Innovations/Student Conduct Officer. See Campus Policies and Procedures chapter - Solicitation Policy.

STUDENT HANDBOOK

All regulations and policies pertaining to student conduct are listed in the student handbook. The handbook may be viewed online at http://handbook.waketech.edu. Students are responsible for reading the information in the student handbook. One of the conditions of enrollment is the student must follow the Student Code of Conduct, which is located in the Student Handbook.

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 Wake Tech's Campus Police & Security Services office.

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 –

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 Wake Tech classrooms to interview and photograph students. The college welcomes these opportunities while respecting 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 being recorded.

CAMPUS POLICE & 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 Campus Police Chief is primarily responsible for developing rules and regulations to implement these policies. Crimes on all campuses are reported to the Campus Police Department, 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. 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 Campus Police Department 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 Student Services Building, room 233, Main Campus, 9101 Fayetteville road, Raleigh, NC 27603.

Some 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 Campus Police Chief, whose office is on Main Campus, in Student Services, room 233 and whose telephone number is 919-866-5532. The Campus Police Chief also can be contacted by dialing the College's main switchboard number, 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 the following subjects:

- Crime and Safety
- Self-Defense
- Drugs and Alcohol
- 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 Campus Police 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
Wake Tech Campus Police Officers can conduct presentations 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 Crime Statistics

Type of Offense		On Campus	*Non-Campus Building or Property	Public Property
Criminal Homicide				
Murder/Non-negligent Manslaughter	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Negligent Manslaughter	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Sex Offense				
Forcible Sex Offense	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Non-forcible Sex Offense	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Robbery				
	2010	1	0	0
	2011	0	0	0
	2012	0	0	0
Aggravated Assault				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0

Burglary				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Motor Vehicle Theft				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Arson				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0

*** Includes the following locations: Apex High School, Athens Drive High School, Enloe High School, Knightdale High School, Leesville Road High School, Martin Middle School, Millbrook High School, Reedy Creek Middle School, Sanderson High School, Southeast High School, and Wake Forest-Rolesville High School.**

Main Campus Hate Crime Statistics

Type of Offense		On Campus	*Non-Campus Building or Property	Public Property
Criminal Homicide				
Murder/Non-negligent Manslaughter	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Negligent Manslaughter	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Sex Offense				
Forcible Sex Offense	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Non-forcible Sex Offense	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Robbery				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Aggravated Assault				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0

Burglary				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Motor Vehicle Theft				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Arson				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Larceny-Theft				
	2010	0	0	0
	2011	0	0	0
	2012	21	0	0
Simple Assault				
	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Intimidation				
	2010	0	0	0
	2011	0	0	0
	2012	2	0	0
Destruction/Damage/Vandalism of Property				
	2010	0	0	0
	2011	0	0	0
	2012	7	0	0

*** Includes the following locations: Apex High School, Athens Drive High School, Enloe High School, Knightdale High School, Leesville Road High School, Martin Middle School, Millbrook High School, Reedy Creek Middle School, Sanderson High School, Southeast High School, and Wake Forest-Rolesville High School.**

Main Campus Arrests and Judicial Referrals

Other Offenses		On Campus	*Non-Campus Building or Property	Public Property
Arrests				
Liquor Law Violations	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Drug Abuse Violations	2010	0	0	0
	2011	0	0	0
	2012	1	0	0
Illegal Weapons Possession	2010	0	0	0
	2011	4	0	0
	2012	0	0	0

Judicial Referrals				
Liquor Law Violations	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Drug Abuse Violations	2010	0	0	0
	2011	0	0	0
	2012	0	0	0
Illegal Weapons Possession	2010	0	0	0
	2011	1	0	0
	2012	0	0	0

*** Includes the following locations: Apex High School, Athens Drive High School, Enloe High School, Knightdale High School, Leesville Road High School, Martin Middle School, Millbrook High School, Reedy Creek Middle School, Sanderson High School, Southeast High School, and Wake Forest-Rolesville High School.**

Perry Health Science Campus Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0

Health Science Campus Crime Statistics (Continued)

Robbery			
	2010	0	0
	2011	0	0
	2012	0	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	0	0

Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0

Perry Health Sciences Campus Hate Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	0	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	0	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0

Arson			
	2010	0	0
	2011	0	0
	2012	0	0
Larceny-Theft			
	2010	0	0
	2011	0	0
	2012	4	0
Simple Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Intimidation			
	2010	0	0
	2011	0	0
	2012	0	0
Destruction/Damage/Vandalism of Property			
	2010	0	0
	2011	0	0
	2012	2	0

Perry Health Sciences Campus Arrests and Judicial Referrals

Other Offenses		On Campus	Public Property
Arrests			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	1	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	0

Perry Health Sciences Campus Arrests and Judicial Referrals

Judicial Referrals			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	0

Northern Wake Campus Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	1	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	2	0
Motor Vehicle Theft			
	2010	0	0
	2011	1	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0

Northern Wake Campus Hate Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0

	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	0	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	0	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0
Larceny-Theft			
	2010	0	0
	2011	0	0
	2012	17	0
Simple Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Intimidation			
	2010	0	0
	2011	0	0
	2012	2	0

Destruction/Damage/Vandalism of Property			
	2010	0	0
	2011	0	0
	2012	5	0

Northern Wake Campus Arrests and Judicial Referrals

Other Offenses		On Campus	Public Property
Arrests			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	1	0
	2011	2	0
	2012	2	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	0
Judicial Referrals			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	2	0
	2012	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	0

Western Wake Campus Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0

Robbery			
	2010	0	0
	2011	0	0
	2012	0	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	0	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0

Western Wake Campus Hate Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	0	0

Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	0	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0
Larceny-Theft			
	2010	0	0
	2011	0	0
	2012	2	0
Simple Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Intimidation			
	2010	0	0
	2011	0	0
	2012	0	0
Destruction/Damage/Vandalism of Property			
	2010	0	0
	2011	0	0
	2012	0	0

Western Wake Campus Arrests and Judicial Referrals

Other Offenses		On Campus	Public Property
Arrests			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0

	2012	0	0
Judicial Referrals			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	0

Public Safety Education Campus Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	0	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	1	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0

Arson			
	2010	0	0
	2011	0	0
	2012	0	0

Public Safety Education Campus Hate Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	0	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	0	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0
Larceny-Theft			
	2010	0	0
	2011	0	0
	2012	0	0

Simple Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Intimidation			
	2010	0	0
	2011	0	0
	2012	0	0
Destruction/Damage/Vandalism of Property			
	2010	0	0
	2011	0	0
	2012	0	0

Public Safety Education Campus Arrests and Judicial Referrals

Other Offenses		On Campus	Public Property
Arrests			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	0
Judicial Referrals			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	0

Adult Education Center Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0

Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	0	1
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	1	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0

Adult Education Center Hate Crime Statistics

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
	2012	0	0
Sex Offense			
Forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0

Non-forcible Sex Offense	2010	0	0
	2011	0	0
	2012	0	0
Robbery			
	2010	0	0
	2011	0	0
	2012	0	0
Aggravated Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Burglary			
	2010	0	0
	2011	0	0
	2012	0	0
Motor Vehicle Theft			
	2010	0	0
	2011	0	0
	2012	0	0
Arson			
	2010	0	0
	2011	0	0
	2012	0	0
Larceny-Theft			
	2010	0	0
	2011	0	0
	2012	0	13
Simple Assault			
	2010	0	0
	2011	0	0
	2012	0	0
Intimidation			
	2010	0	0
	2011	0	0
	2012	0	0
Destruction/Damage/Vandalism of Property			
	2010	0	0
	2011	0	0
	2012	0	0

Adult Education Center Arrests and Judicial Referrals

Other Offenses		On Campus	Public Property
Arrests			

Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	1
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	0	1
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	0	1
Judicial Referrals			
Liquor Law Violations	2010	0	0
	2011	0	0
	2012	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
	2012	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
	2012	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.

VISITORS AND CHILDREN ON CAMPUS

Website: http://www.waketech.edu/about-wake-tech/locations/visitor-information

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.

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.

HEALTH AND SAFETY, STUDENT INSURANCE

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.

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 Code of Conduct, Rights, and Responsibilities 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.

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.

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. 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 Perry 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.

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: discrimination against pregnant and parenting students, 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**.** Benita Clark, Chief Human Resource Officer, is the college's Title IX Coordinator. The Senior Vice President for Student Services, Rita Jerman and the Associate Vice President, Public Safety Education Campus, Anthony Caison,

serve as deputy coordinators. They are responsible for implementing and monitoring Wake Technical Community College's Title IX compliance. Investigators are also trained to assist in carrying out Title IX duties.

Mrs. Rita Jerman	**Ms. Benita Clark**	**Mr. Anthony Caison**
919-866-5701	**919-866-7894**	**919-866-6101**
whjerman@waketech.edu	biclark@waketech.edu	amcaison@waketech.edu

When concerns are brought to their 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. Initial complaints must be completed within 30 days from the date of the report; therefore 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.

INTELLECTUAL PROPERTY, COPYRIGHTS & PATENTS

Wake Technical Community College values an active intellectual environment where creative thought is encouraged and can develop into creative products. The College recognizes that such creative products are protected by intellectual property rights. Because College employees and students may create original works of a printed or other nature or produce inventions or discoveries, and because employees may make use of the original works of others, the College has established the following policy to clarify intellectual property rights for all parties involved.

Definitions

Intellectual Property: Certain intellectual and creative works qualify for protection under the laws of the United States of America. Title 17 of the United States Code defines federal copyright protection, details original works of authorship protected, and outlines the process for protecting such works. Title 35 of the United States Code defines patent protection, details inventions and discoveries protected, establishes conditions for patentability, and spells out the process for the granting of patents.

Independent Works
Works in which the College has no intellectual property rights and includes works covered by copyright or patent protection produced by a College employee while NOT in the course or scope of his/her employment and by the employee or any person (including students of the College) without College support. An independent work is characterized by, for example, the applicability of the following criteria:

- The work is the result of individual initiative. It is not the product of a specific contract or assignment made as a result of employment with the College.
- The work is not a product of the employee's job duties.
- The work is produced by an employee outside his/her work schedule.
- The work is produced by an employee or by any person (including students of the College) without funds, resources, or facilities owned or controlled by the College.

College-Supported Works
Works covered by copyright or patent protection produced by a College employee in the course or scope of his/her employment or by any person (including College students) with College support. A College-supported work is characterized by, for example, the applicability of one or more of the following criteria:

- The work is the product of a specific contract or assignment made as a result of employment with the College.
- The work is a product of the employee's job duties.
- The work is produced by an employee during his/her work schedule.
- The work is produced by an employee or by any person (including students of the College) with funds, resources, or facilities owned or controlled by the College. College funds include, but are not limited to, release time, grant funds, salary supplements, leave with pay, and other material or financial assistance.

Fair Use
Title 17, Chapter 1, Section 107 (Fair Use) of the United States Code allows for the use of materials copyrighted by others and states as follows:

- U.S. Code, Title 17, Chapter 1
- Section 107. Limitations on exclusive rights: Fair use

Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:

- the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- the nature of the copyrighted work;
- the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- the effect of the use upon the potential market for or value of the copyrighted work.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

Any person wishing to use copyrighted materials under conditions not permitted by these Fair Use provisions must first gain permission from the author or appropriate owner prior to using such material. The College employee who intends to use copyrighted materials for College-related activities must file all correspondence and documentation securing permission with his/her dean or unit manager. The documentation will consist of not less than the letter requesting the approval to copy, the letter of response from the author or owner, and the article or materials to be copied.

Rights in Intellectual Property

Purpose
This policy is stated to define and protect ownership rights to intellectual property, whether independent works or College-supported works, created by College employees, students, and others having formal relationships with the College.
Ownership Rights
Independent Works: The creator of an independent work qualifying for copyright or patent protection under the appropriate U.S. Code owns all intellectual property rights to that work. This includes the right to voluntarily transfer intellectual property ownership, in whole or in part, through a formal written agreement signed by the creator of the independent work.

College-Supported Works: Unless otherwise provided for in a written agreement, the College owns all intellectual property rights to a work produced with College support and qualifying for copyright or patent protection. This includes the right to

voluntarily transfer intellectual property ownership, in whole or in part, through a formal written agreement approved by the Board of Trustees and signed by its chair.

Distribution of Revenues and Other Benefits
The creator of an independent work qualifying for copyright or patent protection controls any revenues or other benefits generated by those works.

Unless otherwise provided for in a written agreement, the College controls any revenues or other benefits generated by its intellectual property rights to College-supported works qualifying for copyright or patent protection.

Written Agreement
Notwithstanding the College's ownership rights in a College-supported work, the President, normally with the approval of the employee's supervising administrators and the dean or manager of the employee's division, may enter into a written agreement with an employee for an equitable arrangement for joint ownership, sharing of royalties, or reimbursement to the College for its costs and support. In all such cases, the agreement shall provide that the College will have a perpetual license to use the work without compensation to the employee for such use.

The College recognizes that the research and development of an idea frequently requires the expenditure of time and money as well as the use of lab space, equipment, or other campus facilities. In order to assist worthy projects, Wake Technical Community College may enter into a written agreement with a College employee or student whose research or other work has demonstrable merit in order to assist that individual. Examples of assistance are: financial assistance for the purchase of supplies, payment of patent fees, and other costs deemed necessary to the successful development of the individual's idea, concept, design, or invention. In all such cases, the agreement shall provide for the College a basis of ownership, or an agreement to reimburse the College for its costs and support as agreed upon by the employee or student and the College Board of Trustees. In no circumstances, however, shall the College agreement deprive, diminish, or abrogate the rights of the College as specified in section 4a above.

Grant-Supported Works
Notwithstanding the provisions of this policy, in the case of a work created under a grant accepted by the College, the ownership provisions of the grant shall prevail.

Consulting
Subject to prior approval by the College and to the provisions of College policies, College employees may consult for outside organizations. Any consulting agreement should include a statement that the employee has obligations to the College as described in this Intellectual Property Policy, and this policy should be attached to the consulting agreement. In the event that there is any conflict between the consultant's obligations to this Intellectual Property Policy and that consultant's obligations to the entity for which he/she consults, the obligations to this Intellectual Property Policy shall control.

Intellectual Property Policy and Rights Committee
The Intellectual Property Policy and Rights Committee is responsible for the resolution of issues and disputes pertaining to intelluctual property.

Purpose

Policy Development — The Committee shall monitor and review technological and legislative changes affecting intellectual property policy and shall report to relevant faculty, staff, and administrative bodies, when such changes affect existing policies. The committee shall serve as a forum for the receipt and discussion of proposals to change existing institutional policies related to intellectual property

Rights Determination — Disputes over ownership, and the attendant rights, of intellectual property will be reviewed by the Intellectual Property Policy and Rights Committee. The committee shall make an initial determination of whether the College or any other party has rights to the work qualifying for copyright or patent protection and if so, the basis and extent of those rights. The committee shall also make an initial determination on resolving competing claims to ownership when the parties cannot reach an agreement on their own.

Management Recommendations — The committee will review the merits of College-owned intellectual property and make recommendations for its management, including development, patenting, and exploitation.
Membership
The Intellectual Property Policy and Rights Committee will be composed of members equally apportioned between faculty (elected by the Faculty Senate), staff (elected by the Staff Council), and administration (appointed by the president). The committee members shall elect a chair from among themselves each year.
At the time of initial appointment or election, each member shall be designated as serving a one-, two-, or three-year term, so that the term of one faculty committee member, one staff committee member, and one administration member will expire each year and replacements will be appointed or elected each year. After the first appointment subsequent members shall

serve three-year terms, commencing on July 1 and terminating on June 30. Committee members may serve one additional three-year term.

Right of Appeal
When a person claiming to be a creator of intellectual property covered by this policy disagrees with the decision of the Intellectual Property Policy and Rights Committee on issues including but not limited to ownership rights, he/she may appeal to the College President.

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

CONTINUING EDUCATION

Website: http://continue.waketech.edu

COLLEGE & CAREER READINESS PROGRAM Website: http://basicskills.waketech.edu Dean: Monica Gemperlein Phone: 919-334-1520 Email: mpgemperlein@waketech.edu 1. Adult Basic Education 2. GED/High School Diploma Equivalency 3. Adult High School Diploma 4. ABE TOPS 5. English as a Second Language	**BIONETWORK CAPSTONE CENTER AT (BTEC)** Website: http://www.ncbionetwork.org Dean: Ana McClanahan Phone:919-513-2311 Email: ammcclanahan@waketech.edu 1. Bionetwork Capstone Center Short Courses 2. Validation Academy
BUSINESS AND INDUSTRY SERVICES Website: http://bic.waketech.edu Dean: Timothy Lucas Phone: 919-335-1001 Email: tlucas1@waketech.edu 1. Apprenticeship Training 2. Industry Training 3. Customized Training Program 4. Professional Development and Corporate Training 5. Small Business Center 6. Wake Tech/Wells Fargo Center for Entrepreneurship	**EDUCATION SERVICES & TECHNOLOGY** Dean: Ray Tims Phone: 919-532-5523 Email: rtims@waketech.edu 1. Non-Credit Computer Education 2. Human Resources Development 3. International Learning & Vocational Education 4. Distance Learning Programs 5. Special Projects & Educational Programs
EVENING AND WEEKEND PROGRAMS Dean: Pamela Little Phone: 919-866-5805 Email: pmlittle@waketech.edu 1. Occupational Training and Upgrading 2. Wake County Community Schools Program	**PUBLIC SAFETY TRAINING** Website: http://publicsafety.waketech.edu Dean: Angela Mizelle Phone: 919-866-5825 Email: ajmizelle@waketech.edu 1. Fire Service Training 2. Emergency Medical Services 3. Law Enforcement In-Service Training 4. Correction and Detention Training 5. Basic Law Enforcement Training
RECORDS AND REGISTRATION Dean: Karen Holding-Jordan Phone: 919-866-5838 Email: khjordan@waketech.edu 1. Records 2. Registration 3. Scheduling	**OCCUPATIONAL SERVICES** Dean: Lonette Mims Phone: 919-866-5829 Email: lemims@waketech.edu 1. Corrections Education 2. Nurse Aide 3. Hospitality Programs 4. Biowork Program
CORPORATE SOLUTIONS Website: http://corporatesolutions.waketech.edu Dean: Associate Vice President Jamie Glass Phone: 919-532-5587 Email: jglass@waketech.edu 1. Industry Specific Solutions 2. Online Solutions 3. Training & Corporate Solutions	

CONTINUING EDUCATION (NON-CREDIT)

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. Programs include customized workforce training, small business support, public safety officer training, and instruction enabling participants 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.

Continuing Education Transcripts

Students who have taken non-credit classes may request copies of their **official transcripts** by going tohttp://www.waketech.edu/student-services/registration-student-records/transcripts.

Unofficial transcripts may be obtained by logging into WebAdvisor, using your Wake Tech username and password, and clicking on "Transcript" in the Academic Profile area. If you do not have a Wake Tech username and password, then complete and submit an electronic Student Record Inquiry form.

GRADING POLICY

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

Grade	Explanation
S	Satisfactory (attended at least 80% of scheduled class hours)
*U	Unsatisfactory
*NG	No grade
*W	Withdrew

*Individual courses may vary in attendance policy and requirements to attain "Satisfactory" status. Contact appropriate Continuing Education staff to establish specific requirements.

*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

Continuing Education Registrar

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.

Admissions

Any adult 18 years of age or older, or emancipated minor not enrolled in public school, may be admitted to an adult education class. A person 16-18 years of age may enroll in certain courses upon the approval of the appropriate public school principal or superintendent. For more detailed information regarding the admissions and registration process of minors, please click here.

A course schedule is available in an interactive online format at http://ceregistration.waketech.edu. Information about all

continuing education classes may be obtained by calling the college at 919-866-5800.

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, provided that there's an instructor and suitable facility.

Site locations and abbreviations can be found at http://www.waketech.edu/about-wake-tech/locations/directions.

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."

Students may repeat occupational extension course more than once if the repetitions are required for certifications, licensure or recertification. Contact the Continuing Education Associate Registrar's office for more information at 919-335-1044.

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. Course descriptions are furnished upon request, while descriptions for classes currently open for registration are listed in the interactive online schedule. Courses may be offered to meet expressed needs of the community when evidence of these needs is presented to the College.

FEES

A registration fee is charged for Community Service and Occupational Continuing Education courses:

Number of Hours	Registration Fee*
1-24	$70
25-50	$125
51+	$180

***Note:** Rate is set by NC Legislation and is subject to change without notice.

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.

A registration fee is not charged for Adult Basic Education programs, for preparatory instructional programs for the High School Diploma Equivalency Certificate, for the Adult High School Diploma program, or for English as a Second Language program.

GED Fees

Effective January 1, 2014: Anyone in North Carolina interested in completing a high school credential by taking the GED® exam must register at www.ged.com. Exam fees for the four-part, computer-based exam are $120 ($30 per section) and must be paid through the website at the time of registration, using debit or credit card or voucher. All four sections of the exam must be passed to earn the credential. Wake Tech's Adult Education Center is an authorized site for the GED® exam.

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.

CONTINUING EDUCATION 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.

COLLEGE & CAREER READINESS 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. College & Career Readiness offers educational opportunities in several areas, including Adult Basic Education (ABE), General Educational Development (GED), Adult High School (AHS), and English as a Second Language (ESL). Placement into these programs is determined by standardized assessment tools. If students do not demonstrate progress within one year of attendance, they will be dropped from the program, however, referred to other college programs or a more appropriate agency.

College & Career Readiness Ability to Benefit Policy

Adults wishing to enroll in College & Career Readiness 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.

Wake Technical Community College offers Adult Basic Education (ABE), General Educational Development (GED), Adult High School (AHS), and English as Second Language (ESL) 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.

According to performance measures outlined in the Workforce Investment Act of 1998, students in College & Career Readiness 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. Students with intellectual disabilities who enroll in our College & Career Readiness programs must also demonstrate sufficient improvement on the CASAS test within two years.

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 College & Career Readiness Program:

- Non-high school graduates who are 16 or 17 years of age will not be allowed to enroll in the College & Career Readiness 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 & Career Readiness 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.

COLLEGE & CAREER READINESS PROGRAMS

College & Career Readiness programs include Adult Basic Education, General Educational Development (GED), Adult High School, ABE TOPS, 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 work place.
- Develop academic skills needed to pursue postsecondary education.

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 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.

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 connecting 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.

ABE TOPS (Transitional Opportunities for Post-Secondary Success
ABE TOPS is designed for adults with intellectual disabilities or Traumatic Brain Injury (TBI) who want to achieve a higher level of independence by building academic, social, vocational, and life skills. ABE TOPS is specifically for adults 17 years of age and older who may not have attended public school, attended on a limited basis, or simply need additional educational opportunities after leaving public school. This is a year-round program, and documentation of an intellectual disability or TBI is required to enroll. All interested participants must demonstrate the ability to benefit from the program by taking the CASAS pre-test. Students unable to complete the pre-test may be admitted to the program at a future date after successfully completing it.

For more information or to make an appointment for orientation and testing, call 919-334-1507.

English as a Second Language
English as a Second Language (ESL) classes are designed for people whose native language is not English. The program focuses on four skill areas – speaking, listening, reading, and writing – and prepares students to live, work, and continue their post-secondary education in the United States. Instructors assist students with pre-employment preparation, community interaction, cultural enrichment, and professional and academic advancement. Citizenship classes are also offered.

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 situated in the **Golden LEAF Biomanufacturing Training and Education Center (BTEC)** on the Centennial Campus of North Carolina State University. It provides a training environment that mirrors a biomanufacturing plant facility with state-of-the-art classrooms, industrial-grade equipment 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

Five certificates are offered by the Capstone Center. Courses can be taken individually and focus on a variety of critical skill sets within areas important to biomanufacturing: good manufacturing practices (GMP), aseptic manufacturing, operations in biotechnology processes, industrial microbiology, good laboratory practices (GLP), HPLC, and validation.

- The BioNetwork Capstone Certificate in Biomanufacturing
- The BioNetwork Capstone Certificate in Analytical Lab Skills
- The BioNetwork Capstone Certificate for Instrumentation/Calibration Technicians in Support of Biomanufacturing
- The BioNetwork Capstone Certificate for Maintenance Technicians in Support of Biomanufacturing
- The BioNetwork Capstone Certificate in Computer Validation

BUSINESS & INDUSTRY SERVICES

Wake Tech's Business and Industry Services Division focuses on the lifelong learning needs of the business community. To thrive in today's fast-paced, digital economy; businesses must continue to learn and to leverage new technologies.

The Business and Industry Center (BIC) at Wake Tech's Western Wake Campus provides classes and seminars and offers customized employee training at employer sites and other locations, including our Northern Wake Campus in north Raleigh.

APPRENTICESHIP TRAINING

Wake Tech has been designated by the North Carolina Community College System as a center for formal apprenticeship training. We assist companies' customized apprenticeship training programs by providing the instructional component of the apprenticeship experience.

INDUSTRY TRAINING

Wake Tech assists area industries in training and retraining employees to keep them competitive and up-to-date with industry standards. Courses range from fundamental skills to more sophisticated technical skills; specialized skills in PLC, CNC, Six Sigma, Lean Manufacturing, welding, electricity, and more; and leadership skills for management and supervision.

CUSTOMIZED TRAINING PROGRAM (CIT)

Wake Tech's customized training programs support North Carolina's economic development initiatives by providing training assistance for eligible business and industries. The programs enhance the workforce with the skills required for 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.

WAKE TECH/WELLS FARGO CENTER FOR ENTREPRENEURSHIP

The center was established to contribute to local workforce and economic development by supporting small business owners and entrepreneurs – increasing the number of new businesses and improving the success rates of both new and existing businesses.

Learn more at http://entrepreneurship.waketech.edu.

SMALL BUSINESS CENTER (SBC)

Wake Tech's small business center works to increase the number and success rate of small businesses in North Carolina by providing high quality, readily-accessible assistance to current and prospective business owners and their employees. The SBC provides education, training, information, and referrals.

The center maintains a resource library of print materials and videos to assist business owners with research and problem solving. The SBC provides these resources, along with confidential counseling services, seminars, and workshops, free of charge.

Learn more at http://sbc.waketech.edu.

EDUCATION SERVICES & TECHNOLOGY

HUMAN RESOURCES DEVELOPMENT (HRD)

Human Resources Development (HRD) provides assessment services, employability training, and career development counseling to unemployed and underemployed individuals, age 18 and older, to prepare them for success in the workplace. Training focuses on helping students obtain and perform successfully in entry-level jobs; it 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 skills and improve employment prospects. Class times and total contact hours vary.

Employability Skills Training is the centerpiece of HRD training, the core training component around which the other four revolve. Employability Skills Training includes job preparation, job-seeking skills, job-keeping skills, lifelong learning, and life skills. Learn more at http://hrd.waketech.edu.

NONCREDIT COMPUTER EDUCATION

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, through Education-to-Go (ed2go) and other platforms. Learn more at http://computertechnology.waketech.edu.

INTERNATIONAL LEARNING & VOCATIONAL EDUCATION

The International Learning and Vocational Education Department provides language instruction for all levels, beginner to advanced. Classes focus on helping students build language skills for personal enrichment and enhanced employment opportunities and allow them to learn about the world.

Command Spanish is non-grammar-based training designed to help employees use limited amounts of everyday Spanish to meet the needs of their employers and the community. The training gives employers a practical way to offer professional development to their employees.

Vocational training classes provide development in programs such as electrical wiring, HVAC, and many others. Basic computer classes help students build skills in keyboarding and operating systems and gain confidence to proceed with further computer training.

DISTANCE LEARNING PROGRAMS

Wake Tech's Distance Learning programs enhance the learning experience and increase student success overall. The programs succeed by 1) partnering with leading educational organizations to deliver instruction online, and 2) providing relevant courses and quality instruction. Wake Tech has a reputation for quality and for the strength of its faculty; online courses make these resources available to a greater number of students.

SPECIAL PROJECTS & EDUCATIONAL PROGRAMS

Wake Tech's PLUS 50 initiative offers classes and events to help adults zero in on a new career, plan for retirement, or simply enjoy this stage of life. Although these classes are designed for those 50 and older, everyone is welcome. Participants can learn new skills, enhance their resumes, maintain health and wellness, or start new hobbies!

Substitute Effective Teacher Training

This program helps prospective substitute teachers develop instructional preparation; learn time management and presentation skills, discipline strategies, and hands-on activities for the classroom; and become familiar with NC school laws and all levels of administrative expectations.

Note: Effective November 2012, an applicant must have completed a minimum of 48 semester hours from an accredited college or university to be considered for substitute teaching. Substitute Effective Teacher Training will no longer be sufficient for meeting minimum requirements.

The **Nonprofit Management Certificate** provides the skills to build and manage a successful nonprofit organization.

CORPORATE SOLUTIONS

Wake Tech's Corporate Solutions Division provides state-of-the-art training, customized to meet the individual needs of a wide variety of corporate clients and enhance quality, efficiency, productivity, and profitability.

Training options are virtually limitless and completely customizable, no matter the industry or field. Corporate Solutions works with clients one-on-one to determine their specific training needs and help them reach optimal workplace performance. The division offers high-quality, affordable training and consultative services, on site and online, to ensure that corporate clients maximize productivity.

Sample program offerings:

- Industry-Specific Solutions
- Online Solutions
- Training and Consultation Solutions

Military Spouse MyCAA Program
Military spouses may qualify for up to $4,000 for education in a variety of in-demand and portable career fields. This program is available to spouses of active duty service members in pay grades E1-E5, W01-CW2, and O1-O2.

Learn more: http://corporatesolutions.waketech.edu.

EVENING & WEEKEND PROGRAMS

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
- Automotive Safety
- Building Trades
- Business Management
- Computer Skills
- Electrical-Electronics Trade
- Foreign Languages
- Green Technology
- Internet-based Instruction
- Machine Trades & Welding
- Medical Terminology, Coding, and Transcription
- On-Board Diagnostic Emission Certification
- Plumbing
- Real Estate Updates

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 credit and continuing education courses at local schools four evenings per week.

Assorted courses from other curricula are also offered evenings and Saturdays.

PUBLIC SAFETY TRAINING

The following program areas provide training for public safety personnel and others who wish to increase competencies in specialized occupational areas.

EMERGENCY MEDICAL SERVICES (EMS)
These courses are designed to meet the needs of local emergency services agencies, healthcare providers, and the public,

with an emphasis on emergency patient care in pre-clinical settings. EMS training also includes health education courses for those interested in healthcare and related institutions or retraining.

FIRE SERVICE TRAINING
Fire Service Training is delivered directly to local fire departments, allowing personnel to learn with the actual equipment they will use in controlling fires. Classes include those listed below along with related classes in industrial brigade training, home fire safety, and search and rescue:

- CPR & First Aid
- Ropes
- USAR
- Fire Hoses / Extinguishers
- Ladders
- Fire Officer I & II
- Instructor I & II
- Rescue Techniques
- EMR courses

LAW ENFORCEMENT IN-SERVICE TRAINING
In-service training for law enforcement personnel is provided at the request of law enforcement agencies. Training emphasizes legal and technological law enforcement advancements. Programs include Criminal Investigation and the Police Law Institute, as well as those listed below:

- Radar / SMI
- Simunitions / Force on Force
- General Instructor
- Personal Protective Services
- Criminal Investigation
- Police Law Institute
- Legal Update (Arrest, Search & Seizure)
- Narcotics Detection / Investigations
- Accident Reconstruction

BASIC LAW ENFORCEMENT TRAINING (BLET)
This program 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. The program covers topics and uses instructional methods mandated by the North Carolina Criminal Justice Education and Training Standards Commission. Topics include but are not limited to criminal, juvenile, civil, motor vehicle, and alcohol beverage laws; investigative, patrol, custody and court procedures; emergency responses; and community relations. The course is filled with practical exercises, and an extensive ethics section is woven throughout the training experience.

The Wake Tech BLET Academy offers the state commission-mandated 620 hour program along with an additional 124 hours of training, for a total of 744 hours. The additional hours include officer survival, public speaking, and other law enforcement-related training.

To qualify for the program, students must meet the Minimum Standards for the Certification of Law Enforcement Officers Administrative Code 12 NCAC 9B .0101/9B .0111 and Admission of trainees 12 NCAC 09B .0203 ADMISSION OF

TRAINEES.

Cadets completing the Academy are eligible to take the state comprehensive written exam and skills testing. Upon successful completion of the BLET State Comprehensive Written Examination, the Cadet has one year to be duly appointed and sworn as a law enforcement officer in North Carolina.

CORRECTIONS AND DETENTION TRAINING
In-service corrections and detention training is provided for Department of Correction personnel at the request of the department. Training emphasizes officer safety and inmate security and includes courses such as the following:

- Supervisory / Leadership and Mentoring
- Gang Awareness & Identification
- Teamwork
- Report Writing
- Promotional Examination Preparation
- Investigative & Interviewing Techniques
- Spanish For Corrections / Detention Personnel

OCCUPATIONAL SERVICES

Nurse Aide I Program (NA I)
NA I introduces students to basic nursing skills needed in a health care setting and is approved by the NC Division of Health Service Regulation. Topics include communication, safety, patient rights, personal care, vital signs, elimination, nutrition, emergencies, rehabilitation, and mental health. Upon completion, students will be able to demonstrate the skills necessary to perform as a nurse aide.

Additional classes offered to current Nurse Aides:

- Nurse Aide I Refresher Class
- Nurse Aide II
- Home Care Nurse Aide Specialty

Hospitality Programs
These programs train individuals in food service, lodging, and travel information. Primary objectives are to provide hospitality industry employers with well-trained personnel and to help individuals develop skills that will qualify them for greater employment opportunities. Hospitality training is arranged and scheduled in accordance with the needs of the industry. Programs and courses include:

- **START** (Skills, Tasks and Results Training) Hospitality Certification Program
- Servsafe
- Human Resources for Hospitality
- Night Auditors
- Housekeeping
- Certified Pool Operator
- Activity Coordinator for Long term Care Facility

CORRECTIONS EDUCATION
Corrections Education is delivered to immured individuals who have been assigned to Wake County facilities by the NC Department of Public Safety. The primary purpose of the program is to increase the safety of the general public by reducing recidivism via educational and vocational training.

BIOWORK
BioWork is a 128-hour certificate course. Students who complete the course are equipped with entry-level skills required for becoming a **process technician** for a biotechnology, pharmaceutical, or chemical-manufacturing company. BioWork is intended for high school graduates, for those in manufacturing industries who have lost their jobs, and for those interested in starting new careers.

WE ARE HERE TO HELP!

Location
Main Campus (401 South) in Holding Hall, Room 131

Phone
919- 866-5800

Website
http://continue.waketech.edu/

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

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.

1. Click on the "**Program Name**" to go to the program's web page
2. Click on the "**Program of Study**" to see specific course requirements for that program

Programs may be offered during the day, evening, online, or a combination. Students should refer to WebAdvisor for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully online.

Program Name	Division to Contact	Program Code
Accounting – ***AAS Degree***	**Business & Public Services Technologies**	A25100
Accounting – ***Diploma***		D25100
Accounting: Core – ***Certificate***		C25100C
Income Tax Preparer – ***Certificate***		C25100B
Payroll Accounting Clerk - ***Certificate***		C25100A
Advertising and Graphic Design – ***AAS Degree***	**Computer Technologies**	A30100
Graphics Design – ***Certificate***		C30100A
Web and Graphic Design - ***Certificate***		C30100B
Advanced Graphic Design - ***Certificate***		C30100D
Design Basic - ***Certificate***		C30100E
Design Portfolio - ***Certificate***		C30100F
Agricultural Systems Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A60410
Agricultural Systems Technology – ***Diploma***		D60410
Air Conditioning, Heating, and Refrigeration Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A35100
Air Conditioning, Heating, and Refrigeration Technology - ***Diploma***		D35100A
Air Conditioning, Heating, and Refrigeration Technology - ***Certificate***		C35100B
Commercial - ***Certificate***		C35100C
Design - ***Certificate***		C35100D
Architectural Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A40100
Architectural CAD – ***Certificate***		C40100A
Building Information Modeling – ***Certificate***		C40100B
Associate Degree Nursing – ***AAS Degree***	**Health Sciences**	A45110
Associate Degree Nursing (LPN to RN Advanced Placement Option) – ***AAS Degree***		A45110
Associate Degree Nursing (RIBN Dual-Enrollment Option) – ***AAS Degree***		A45110
Associate in Arts – ***AA Degree***	**College Transfer**	A10100
Diploma in Arts		D10100
Associate in Fine Arts (Pre-Major: Art) – ***AFA Degree***	**College Transfer**	A1020A
Associate in Fine Arts (Pre-Major: Music) – ***AFA Degree***		A1020D
Associate in Science – ***AAS Degree***	**College Transfer**	A10400
Diploma in Science		D10400
Associate in Science (Pre-Major: Engineering) – ***AS Degree***	**Computer Technologies**	A1040D
Automotive Systems Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A60160
Baking and Pastry Arts – ***AAS Degree***	**Business & Public Services Technologies**	A55130
Baking and Pastry Arts – ***Diploma***		D55130
Baking and Pastry Arts - ***Certificate***		C55130A
BioPharmaceutical Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A20180
Applied Biotechnology - ***Certificate***		C20180A
Biopharmaceutical Regulations - ***Certificate***		C20180B
Biopharmaceutical Manufacturing and Quality - ***Certificate***		C20180C
Advanced Biopharmaceutical Practices - ***Certificate***		C20180D
Pharmaceutical Basics - ***Certificate***		C20180E
Business Administration – ***AAS Degree***	**Business & Public Services Technologies**	A25120
Business Core – ***Certificate***		C25120D
Career Success – ***Certificate***		C25120G
Customer Service – ***Certificate***		C25120B
Entrepreneurship – ***Certificate***		C25120C
International Marketing - ***Certificate***		C25120M
Leadership - ***Certificate***		C25120F
Sales Development - ***Certificate***		C25120A

CURRICULUM EDUCATION (FOR CREDIT): PROGRAMS OF STUDY

Program Name	Division to Contact	Program Code
Business Administration/Human Resources Management – ***AAS Degree***	**Business & Public Services**	A2512C
Business Administration/Human Resources Management: Core - ***Certificate***	**Technologies**	C2512CA
Business Administration/Human Resources Administration - ***Certificate***		C2512CB
Business Analytics – ***AAS Degree***	**Business & Public**	A25350
Business Intelligence **–** ***Certificate***	**Services Technologies**	C25350A
Business Analyst **–** ***Certificate***		C25350B
Marketing Analytics **–** ***Certificate***		C25350C
Database Analytics **–** ***Certificate***		C25350D
Logistics Analytics **–** ***Certificate***		C25350E
Finance Analytics - ***Certificate***		C25350F
Civil Engineering Technology – ***AAS Degree***	**Applied Engineering**	A40140
Office/CAD **–** ***Certificate***	**& Technologies**	C40140A
Field Technician **–** ***Certificate***		C40140B
Design - ***Certificate***		C40140C
Computed Tomography Technology - ***Certificate***	**Health Sciences**	C45200
Computer Engineering Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A40160
Computer Information Technology – ***AAS Degree***	**Computer**	A25260
Hardware Troubleshooting (A+) - ***Certificate***	**Technologies**	C25260G
IT Foundations - ***Certificate***		C25260M
IT Support Management - ***Certificate***		C25260L
IT Support Technician - ***Certificate***		C25260K
Open Source IT - ***Certificate***		C25260O
Computer Programming – ***AAS Degree***	**Computer**	A25130
C++ Programming **–** ***Certificate***	**Technologies**	C25130C
JAVA Programming **–** ***Certificate***		C25130A
Visual BASIC Programming **–** ***Certificate***		C25130B
Visual C# Programming - ***Certificate***		C25130D
Advanced Computer Programming **–** ***Certificate***		C25130G
Fundamentals of Computer Programming - ***Certificate***		C25130H
Computer Technology Integration	**Computer Technologies**	
Data Storage & Virtualization **–** ***AAS Degree***		A25500D
Healthcare Business Informatics **–** ***AAS Degree***		A25500H
Construction Equipment Systems Technology – ***AAS Degree***	**Applied Engineering &**	A60450
Construction Equipment Systems Technology **–** ***Diploma***	**Technologies**	D60450
Hydraulics, Engines, and Transmission **–** ***Certificate***		C60450BB
Fuel Injection, Electrics, and Electronics **–** ***Certificate***		C60450BC
Construction Management Technology – ***AAS Degree***	**Applied Engineering &**	A35190
Construction Management Technology: Basic **–** ***Certificate***	**Technologies**	C35190C
Basic Construction Estimating **–** ***Certificate***		C35190D
Construction Safety Management **–** ***Certificate***		C35190E
Cosmetology – ***AAS Degree***	**Business & Public**	A55140
Cosmetology - ***Diploma***	**Services Technologies**	D55140A
Criminal Justice Technology – ***AAS Degree***	**Business & Public**	A55180
Principles of Correction - ***Certificate***	**Services Technologies**	C55180A
Criminal Justice Technology/Latent Evidence – ***AAS Degree***	**Business & Public**	A5518A
Principles of Identification and Information - ***Certificate***	**Services Technologies**	C5518A
Culinary Arts – ***AAS Degree***	**Business & Public**	A55150
Culinary Arts **–** ***Diploma***	**Services Technologies**	D55150
Culinary Arts - ***Certificate***		C55150A
Database Management Administrator– ***AAS Degree***	**Computer**	A25150A
Database Management Developer – ***AAS Degree***	**Technologies**	A25150B
Oracle Developer Certificate – ***Certificate***		C25150A
Oracle DBA Programming Certificate – ***Certificate***		C25150B
Database Developer-Microsoft - ***Certificate***		C25150D
Dental Assisting - Diploma	**Health Sciences**	D45240
Dental Hygiene – AAS Degree	**Health Sciences**	A45260
Diesel and Heavy Equipment Technology – ***AAS Degree***	**Applied Engineering &**	A60460
Diesel and Heavy Equipment Technology - ***Diploma***	**Technologies**	D60460

CURRICULUM EDUCATION (FOR CREDIT): PROGRAMS OF STUDY

Program Name	Division to Contact	Program Code
Early Childhood Education – ***AAS Degree***	**Business & Public Services Technologies**	A55220
Early Childhood Education – ***Diploma***		D55220A
Early Childhood Education – ***Certificate***		C55220D
Infant/Toddler Care - ***Certificate***		C55290
School Age – ***Certificate***		C55220E
Electrical Systems Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A35130
Electrical Systems Technology – ***Diploma***		D35130
Electrical Systems Technology - ***Certificate***		C35130
Electronics Engineering Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A40200
Basic Electronics – ***Certificate***		C40200A
PLC Programming – ***Certificate***		C40200B
SCADA Systems – ***Certificate***		C40200E
Instrumentation – ***Certificate***		C40200F
Basic Electronics – ***Certificate***		C40200A
Emergency Medical Science – ***AAS Degree***	**Health Sciences**	A45340
Environmental Science Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A20140
Environmental Education - ***Certificate***		C20140A
Esthetics Technology - ***Certificate***	**Business & Public Services Technologies**	C55230
Fire Protection Technology – ***AAS Degree***	**Business & Public Services Technologies**	A55240
Fire Protection Technology: Basic – ***Certificate***		C55240A
Loss Control/Investigation – ***Certificate***		C55240B
Fire Management – ***Certificate***		C55240C
Food Service Technology – ***Diploma (Offered only to North Carolina Correctional Institute for Women)***	**Business & Public Services Technologies**	D55250
Food Service Technology – ***Certificate (Offered only to North Carolina Correctional Institute for Women)***		C55250
General Occupational Technology – ***AAS Degree***	**Health Sciences**	A55280
Geomatics Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A40420
Geomatics CAD – ***Certificate***		C40420A
Geomatics Field Technician – ***Certificate***		C40240B
Geomatics Design – ***Certificate***		C40420C
Global Logistics Technology – ***AAS Degree***	**Business & Public Services Technologies**	A25170
Global Logistics Technology: Basic – ***Certificate***		C25170A
Distribution Management - ***Certificate***		C25170B
Health and Fitness Science – ***AAS Degree***	**Health Sciences**	A45630
Hospitality Management – ***AAS Degree***	**Business & Public Services Technologies**	A25110
Hospitality Management – ***Diploma***		D25110
Entrepreneur – ***Certificate***		C25110C
Event Management – ***Certificate***		C25110A
Hotel Management – ***Certificate***		C25110B
Restaurant Management - ***Certificate***		C25110D
Human Services Technology – ***AAS Degree***	**Health Sciences**	A45380
Human Services Technology/Substance Abuse – ***AAS Degree***	**Health Sciences**	A4538E
Substance Abuse - ***Certificate***		C4538E
Industrial Engineering Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A40240
Advanced Quality – ***Certificate***		C40240C
Industrial Management – ***Certificate***		C40240A
Information Systems Security – ***AAS Degree***	**Computer Technologies**	A25270
High Technology Criminal Investigations - ***Diploma***		D25270H
Cisco Security – ***Certificate***		C25270C
Systems Security Practitioner - ***Certificate***		C25270I
Red Hat Security – ***Certificate***		C25270R
Interior Design – ***AAS Degree***	**Applied Engineering & Technologies**	A30220
Landscape Architecture Technology – ***AAS Degree***	**Applied Engineering & Technologies**	A40260
Landscape Architecture - ***Certificate***		C40260A
Digital Technology - ***Certificate***		C40260D
Lateral Entry - ***Certificate***	**Business & Public Services Technologies**	C55430
Magnetic Resonance Imaging - ***Diploma***	**Health Sciences**	D45800

CURRICULUM EDUCATION (FOR CREDIT): PROGRAMS OF STUDY

Program Name	Division to Contact	Program Code
Mechanical Drafting Technology – *AAS Degree*	**Applied Engineering & Technologies**	A50340
Mechanical Drafting Technology **– *Diploma***		D50340A
Mechanical Drafting Technology **- *Certificate***		C50340B
Mechanical Engineering Technology – *AAS Degree*	**Applied Engineering & Technologies**	A40320
Mechanical Design **– *Certificate***		C40320B
Thermal Mechanics **- *Certificate***		C40320C
Materials Engineering **– *Certificate***		C40320D
Engineering Management **– *Certificate***		C40320E
Medical Assisting – *AAS Degree*	**Health Sciences**	A45400
Medical Assisting **- *Diploma***		D45400
Medical Laboratory Technology – *AAS Degree*	**Health Sciences**	A45420
Medical Office Administration – *AAS Degree*	**Computer Technologies**	A25310
Medical Office Administration **– *Diploma***		D25310
Medical Document Specialist **– *Certificate***		C25310C
Medical Office Specialist **- *Certificate***		C25310A
Networking Technology – *AAS Degree*	**Computer Technologies**	A25340
Cisco Certified Network Associate (CCNA) **- *Certificate***		C25340C
Cisco Certified Network Professional (CCNP) **- *Certificate***		C25340I
Data Storage and Virtualization - ***Certificate***		C25340L
Linux/Red Hat Administration **- *Certificate***		C25340K
Microsoft Certified Systems Administrator (MCSA) **- *Certificate***		C25340J
Office Administration – *AAS Degree*	**Computer Technologies**	A25370
Office Administration **– *Diploma***		D25370
Office Specialist **– *Certificate***		C25370A
Office Documents **- *Certificate***		C25370B
Microsoft Office Specialist **– *Certificate***		C25370C
Office Administration/Legal **– *Certificate***		C2537AA
Pharmacy Technology – *AAS Degree**	**Health Sciences**	A45580
Pharmacy Technology **– *Diploma****		D45580
Phlebotomy - *Certificate*	**Health Sciences**	C45600
Plumbing - *Diploma*	**Applied Engineering & Technologies**	D35300
Introduction to Plumbing **– *Certificate***		C35300C
Plumbing Concepts I **– *Certificate***		C35300D
Plumbing Concepts II **– *Certificate***		C35300E
Radiography – *AAS Degree*	**Health Sciences**	A45700
Simulation and Game Development	**Computer Technologies**	
Simulation and Game Development-Art & Modeling **– *AAS Degree***		A25450A
Simulation and Game Development-Programming **– *AAS Degree***		A25450P
Modeling and Animation **– *Diploma***		D25450B
Modeling and Animation **– *Certificate***		C25450A
Production **- *Certificate***		C25450B
Mobile Game Development**– *Certificate***		C25450C
Fundamentals I for Simulation and Game Development**– *Certificate***		C25450D
Fundamentals II for Simulation and Game Development**– *Certificate***		C25450E
Quality Assurance for Simulation and Game Development**– *Certificate***		C25450F
Business for Simulation and Game Development**– *Certificate***		C25450G
Programming for Simulation and Game Development**– *Certificate***		C25450H
Production **- *Certificate***		C25450I
Surgical Technology - *Diploma*	**Health Sciences**	D45740
Therapeutic Massage - *Diploma*	**Health Sciences**	D45750
Web Technologies – *AAS Degree*	**Computer Technologies**	A25290
Mobile Content Development **- *Diploma***		D25290
Advanced Web Developer - ***Certificate***		C25290F
Android Application Developer **- *Certificate***		C25290E
iOS Application Developer **- *Certificate***		C25290D
Web Designer **- *Certificate***		C25290C
Web Developer **- *Certificate***		C25290A
Welding Technology – *AAS Degree*	**Applied Engineering & Technologies**	A50420
Welding Technology **– *Diploma***		D50420
Welding Technology **- *Certificate***		C50420B

***Collaborative Agreements**

1. **Pharmacy Technology AAS Degree** and **Pharmacy Technology Diploma** with Johnston Community College
2. **Associate Degree Nursing (RIBN Dual-Enrollment Option) AAS Degree** agreement with Winston-Salem State University

Special Notes about Curriculum Programs

Criminal Background Checks

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.

Length of Programs

The length of our programs is set by the North Carolina Community College System and published in their 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/

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

APPLIED ENGINEERING & TECHNOLOGIES

Applied Engineering & Technologies Division

Dean Patti Godin
Phone: 919-866-5170
Email: pagodin@waketech.edu
Website: http://aet.waketech.edu/

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.

1. Click on the "**Program Name**" to go to the program's web page
2. Click on the "**Program of Study**" to see specific course requirements for that program

Programs may be offered during the day, evening, online, or a combination. Students should refer to WebAdvisor for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully online.

Program Name	Program Code
Agricultural Systems Technology – AAS Degree	A60410
Agricultural Systems Technology **– Diploma**	D60410
Air Conditioning, Heating, and Refrigeration Technology – ***AAS Degree***	A35100
Air Conditioning, Heating, and Refrigeration Technology ***- Diploma***	D35100A
Air Conditioning, Heating, and Refrigeration Technology ***- Certificate***	C35100B
Commercial ***- Certificate***	C35100C
Design ***- Certificate***	C35100D
Architectural Technology – ***AAS Degree***	A40100
Architectural CAD – ***Certificate***	C40100A
Building Information Modeling - ***Certificate***	C40100B
Automotive Systems Technology – ***AAS Degree***	A60160
BioPharmaceutical Technology – ***AAS Degree***	A20180
Applied Biotechnology ***- Certificate***	C20180A
Biopharmaceutical Regulations **- Certificate**	C20180B
Biopharmaceutical Manufacturing and Quality **- Certificate**	C20180C
Advanced Biopharmaceutical Practices **- Certificate**	C20180D
Pharmaceutical Basics **- Certificate**	C20180E
Civil Engineering Technology – ***AAS Degree***	A40140
Office/CAD – ***Certificate***	C40140A
Field Technician – ***Certificate***	C40140B
Design ***- Certificate***	C40140C
Computer Engineering Technology – ***AAS Degree***	A40160
Construction Equipment Systems Technology – AAS Degree	A60450
Construction Equipment Systems Technology **– Diploma**	D60450
Hydraulics, Engines, and Transmission **– Certificate**	C60450BB
Fuel Injection, Electrics, and Electronics **– Certificate**	C60450BC
Construction Management Technology – ***AAS Degree***	A35190
Construction Management Technology: Basic – ***Certificate***	C35190C
Basic Construction Estimating – ***Certificate***	C35190D
Construction Safety Management – ***Certificate***	C35190E
Diesel and Heavy Equipment Technology – AAS Degree	A60460
Diesel and Heavy Equipment Technology **- Diploma**	D60460
Electrical Systems Technology – ***AAS Degree***	A35130
Electrical Systems Technology – ***Diploma***	D35130
Electrical Systems Technology ***- Certificate***	C35130
Electronics Engineering Technology – ***AAS Degree***	A40200
Basic Electronics – ***Certificate***	C40200A
PLC Programming – ***Certificate***	C40200B
SCADA Systems – ***Certificate***	C40200E
Instrumentation – ***Certificate***	C40200F

APPLIED ENGINEERING & TECHNOLOGIES

Environmental Science Technology – ***AAS Degree***	A20140
Environmental Education ***– Certificate***	C20140A
Geomatics Technology – ***AAS Degree***	A40420
Geomatics CAD ***– Certificate***	C40420A
Geomatics Field Technician ***– Certificate***	C40240B
Geomatics Design ***– Certificate***	C40420C
Industrial Engineering Technology – ***AAS Degree***	A40240
Industrial Management ***– Certificate***	C40240A
Advanced Quality ***– Certificate***	C40240C
Interior Design – ***AAS Degree***	A30220
Landscape Architecture Technology – ***AAS Degree***	A40260
Landscape Architecture ***- Certificate***	C40260A
Digital Technology ***- Certificate***	C40260D
Mechanical Drafting Technology – ***AAS Degree***	A50340
Mechanical Drafting Technology ***– Diploma***	D50340A
Mechanical Drafting Technology ***- Certificate***	C50340B
Mechanical Engineering Technology – ***AAS Degree***	A40320
Mechanical Design ***– Certificate***	C40320B
Thermal Mechanics ***- Certificate***	C40320C
Materials Engineering ***– Certificate***	C40320D
Engineering Management ***– Certificate***	C40320E
Plumbing ***- Diploma***	D35300
Plumbing Concepts I – Certificate	C35300D
Plumbing Concepts II – Certificate	C35300E
Welding Technology – ***AAS Degree***	A50420
Welding Technology ***– Diploma***	D50420
Welding Technology ***- Certificate***	C50420B

***Collaborative Agreements**

None at this time

AGRICULTURAL SYSTEMS TECHNOLOGY

Agricultural Systems Technology 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.

Agricultural Systems Technology Degree - A60410

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

ELN	112	DC/AC Electricity	4
HET	110	Diesel Engines	6
HET	114	Power Trains	5
HET	134	Mechanical Fuel Injection	3
HYD	134	Hyd/Hydrostatic Const	4
PME	111	Planters and Sprayers	4
PME	112	Consumer Products	2
PME	121	Component Controls	2
PME	122	Agricultural Telematics	3
TRN	110	Intro to Transportation Tech	2
TRN	120	Basic Transportation Electricity	5
TRN	120A	Basic Transportation Electricity Lab	1
TRN	140	Transportation Climate Control	2
TRN	170	PC Skills for Transportation	2

Major Electives 1

Select 6 hours from the following courses

ELN	110	Survey of Electronics	3
ELN	113	Electronic Fuel Injection	2
HET	115	Electronic Engines	3
HET	128	Med/Heavy Duty Tune-up	2
HET	192	Selected Topics	2
PME	211	Adv Equipment Repair	4

Major Electives 2

Select 2 hours from the following courses

HYD	110	Hydraulics/Pneumatics I	3
HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Med/Heavy Duty	2

Major Electives 3

Select 2 hours from the following courses

WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WLD	112	Basic Welding Processes	2

Graduation Requirements ..... 71 Credit Hours

Agricultural Systems Technology Diploma - D60410

General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

ELN	112	DC/AC Electricity	4
HET	110	Diesel Engines	6
HET	114	Power Trains	5
HET	134	Mechanical Fuel Injection	3
HYD	134	Hyd/Hydrostatic Const	4
PME	111	Planters and Sprayers	4
PME	112	Consumer Products	2
PME	121	Component Controls	2
TRN	110	Intro to Transportation Tech	2
TRN	120	Basic Transportation Electricity	5
TRN	120A	Basic Transportation Electricity Lab	1
TRN	140	Transportation Climate Control	2
TRN	170	PC Skills for Transportation	2

Graduation Requirements ..... 48 Credit Hours

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 Degree - 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	211	Residential System Design	3
AHR	212	Advanced Comfort Systems	4
AHR	213	HVACR Building Code	2
AHR	215	Commercial HVAC Controls	2

AHR	225	Commercial System Design	3
AHR	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 Diploma - 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	213	HVACR Building Code	2

Graduation Requirements.....40 Credit Hours

Air Conditioning, Heating, and Refrigeration Technology Certificate - 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 Certificate - 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 Certificate - 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	HVAC Customer Relations	1
AHR	211	Residential System Design	3
AHR	213	HVACR Building Code	2
AHR	225	Commercial System Design	3

Completion Requirements..... 18 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.

Architectural Technology Degree - A40100

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM	115	Critical Thinking	3
MAT	121	Algebra and Trigonometry	3
PSY	150	General Psychology	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	132	Specifications and Contracts	2
ARC	141	Elementary Structures for Architecture	4
ARC	211	Light Construction Technology	3
ARC	212	Commercial Construction Technology	3

ARC	213	Design Project	4
ARC	220	Advanced Architectural CAD	2
ARC	225	Architectural BIM I	2
ARC	225A	Architectural BIM I Lab	1
ARC	230	Environmental Systems	4
ARC	240	Site Planning	3
ARC	250	Survey of Architecture	3
ARC	264	Digital Architecture	2
BPR	130	Blueprint Reading/Constr	3
SST	140	Green Building and Design Concepts	3

Major Electives

Select 2 credit hours from the following courses

ARC	226	Architectural BIM II	2
ARC	226A	Architectural BIM II Lab	1
ARC	231	Architectural Presentations	4
ARC	235	Architectural Portfolio	3
ARC	261	Solar Technology	2
CIV	125	Civil/Surveying CAD	3
CIV	230	Construction Estimating	3
GIS	111	Introduction to GIS	3
LAR	230	Principles of Exterior Planting	4
LAR	231	Principles of Interior Planting	3
LAR	250	Survey of LAR	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning II	2

Graduation Requirements ..... 72 Credit Hours

Architectural CAD Certificate - C40100A

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	112	Construction Materials and Methods	4
ARC	113	Residential Architectural Technology	3
ARC	114	Architectural CAD	2
ARC	114A	Architectural CAD Lab	1
ARC	220	Advanced Architectural CAD	2

Completion Requirements .....14 Credit Hours

Building Information Modeling (BIM) Certificate – C40100B

ARC	212	Commercial Construction Technology	3
ARC	225	Architectural BIM I	2
ARC	225A	Architectural BIM I Lab	1
ARC	226	Architectural BIM II	2
ARC	226A	Architectural BIM II Lab	1
ARC	264	Digital Architecture	2
CIV	125	Civil/Surveying CAD	3

Completion Requirements ..... 14 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 Technology Degree - 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	114	Safety and Emissions	2
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	163	Adv Auto Electricity	3
AUT	163A	Adv Auto Electricity Lab	1
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
HET	131	Diesel Fuel & Power Systems	3
TRN	120	Basic Transport Electricity	5
TRN	130	Intro to Sustainable Transport	3
TRN	140	Transport Climate Control	2
TRN	140A	Transport Climate Control Lab	2

Graduation Requirements..... 67 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.

APPLIED ENGINEERING & TECHNOLOGIES

Biopharmaceutical Technology Degree - A20180

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM	110	Technology and Society	3
MAT	121	Algebra/Trigonometry	3
PSY	118	Interpersonal Psychology	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
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

Major Electives

Select 3 hours from the following courses

CIS	110	Intro to Computers	3
ENV	110	Environmental Science	3
ENV	110A	Environmental Science Lab	1
ENV	232	Site Assessment and Remediation	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	113	Work-Based Learning I	3
WBL	121	Work-Based Learning II	1
WBL	122	Work-Based Learning II	2

Graduation Requirements ..... 67 Credit Hours

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.

BPM	110	Bioprocess Practices	5
ENV	110	Environmental Science	3
ENV	110A	Environmental Science Lab	1
ENV	232	Site Assessment and Remediation	3
PTC	110	Industrial Environment	3

Completion Requirements .....15 Credit Hours

Biopharmaceutical Regulations Certificate - C20180B

BPM	110	Bioprocess Practices	5
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
PTC	110	Industrial Environment	3

Completion Requirements .....12 Credit Hours

Biopharmaceutical Manufacturing and Quality Certificate - C20180C

CHM	132	Organic and Biochemistry	4
PTC	120	Pharmaceutical Quality Control	4
PTC	210	Pharmaceutical Industrial Processes	4
PTC	222	Pharmaceutical Process Control	3

Completion Requirements..... 15 Credit Hours

Advanced Biopharmaceutical Practices Certificate - C20180D

PTC	212	Applied Microbiology	4
PTC	214	Parenteral Processes	4
PTC	226	Validation	3
PTC	228	Pharmaceutical Issues	1

Completion Requirements..... 12 Credit Hours

Pharmaceutical Basics Certificate - C20180E

BPM	110	Bioprocess Practices	5
ISC	112	Industrial Safety	2
PTC	110	Industrial Environnent	3
PTC	120	Pharmaceutical Quality Control	4
PTC	228	Pharmaceutical Issues	1

Completion Requirements..... 15 Credit Hours

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.

BPM	110	Bioprocess Practices	5
ENV	110	Environmental Science	3
ENV	110A	Environmental Science Lab	1
ENV	232	Site Assessment and Remediation	3
PTC	110	Industrial Environment	3

Completion Requirements..... 15 Credit Hours

Biopharmaceutical Regulations Certificate - C20180B

BPM	110	Bioprocess Practices	5
CHM	131	Introduction to Chemistry	3
CHM	131A	Introduction to Chemistry Lab	1
PTC	110	Industrial Environment	3

Completion Requirements..... 12 Credit Hours

Biopharmaceutical Manufacturing and Quality Certificate - C20180C

CHM	132	Organic and Biochemistry	4
PTC	120	Pharmaceutical Quality Control	4
PTC	210	Pharmaceutical Industrial Processes	4
PTC	222	Pharmaceutical Process Control	3

Completion Requirements..... 15 Credit Hours

Advanced Biopharmaceutical Practices Certificate - C20180D

PTC	212	Applied Microbiology	4
PTC	214	Parenteral Processes	4
PTC	226	Validation	3
PTC	228	Pharmaceutical Issues	1

Completion Requirements .....12 Credit Hours

Pharmaceutical Basics Certificate - C20180E

BPM	110	Bioprocess Practices	5
ISC	112	Industrial Safety	2
PTC	110	Industrial Environnent	3
PTC	120	Pharmaceutical Quality Control	4
PTC	228	Pharmaceutical Issues	1

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 Degree - A40140

General Education Courses

COM	120	Intro to Interpersonal Communication	3
ENG	111	Expository Writing	3
HUM	110	Technology and Society	3
MAT	121	Algebra and Trigonometry	3
PSY	118	Interpersonal Psychology	3

Major Courses

CEG	115	Intro to Tech and Sustainability	3
CEG	151	CAD for Engineering Technology	3
CEG	210	Construction Materials and Methods	3
CEG	211	Hydrology and Erosion Control	3
CEG	212	Intro to Environmental Technology	3
CEG	226	Project Mgmt and Estimating	3
CEG	230	Subdivision Planning and Design	3
CIV	111	Solis and Foundations	4
CIV	125	Civil/Surveying CAD	3
CIV	215	Highway Technology	3
CIV	221	Steel and Timber Design	3
CIV	230	Construction Estimating	3
CIV	240	Project Management	3
EGR	115	Introduction to Technology	3
EGR	251	Statics	3
GIS	111	Introduction to GIS	3
GIS	112	Introduction to GPS	3
SRV	110	Surveying I	4
SRV	111	Surveying II	4
SRV	240	Topo/Site Surveying	4
SRV	260	Field and Office Practices	2
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 71 Credit Hours

Civil Engineering Technology: Office/CAD - C40140A

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.

CEG	151	CAD for Engineering Technology	3
CIV	125	Civil/Surveying Cad	3
DFT	119	Basic CAD	2
GIS	111	Introduction to GIS	3
SRV	110	Surveying I	4

Completion Requirements..... 15 Credit Hours

Civil Engineering Technology: Field Technician – C40140B

CEG	210	Construction Materials and Methods	3
CIV	111	Solis and Foundations	4
CIV	215	Highway Technology	3
SRV	111	Surveying II	4

Completion Requirements..... 14 Credit Hours

Civil Engineering Technology: Design – C40140C

CEG	211	Hydrology and Erosion Control	3
CEG	212	Intro to Environmental Technology	3
CEG	230	Subdivision Planning and Design	3
CEG	235	Project Mgmt and Estimating	3
GIS	111	Introduction to GIS	3

Completion Requirements..... 15 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 Degree - A40160

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM	110	Technology and Society	3
MAT	121*	Algebra/Trigonometry I	3
PSY	118	Interpersonal Psychology	3

Major Courses

CIS	110	Intro to Computers	3
CIS	115	Introduction to Prog and Logic	3
CSC	133	C Programming	3
CTS	120	Hardware/Software Support	3
EGR	115	Intro to Technology	3
ELC	131	Circuit Analysis I	4
ELC	131A	Circuit Analysis I Lab	1
ELN	131	Analog Electronics I	4
ELN	133	Digital Electronics	4
ELN	152	Fabrication Techniques	2
ELN	232	Introduction to Microprocessors	4
ELN	233	Microprocessor Systems	4
ELN	235	Data Communication Systems	4
ELN	275	Troubleshooting	2
NOS	110	Operating System Concepts	3
NOS	120	Linux/UNIX Single User	3
WBL	112	Work-Based Learning I	2

Major Electives 1

Select 3 credit hours from the following courses

CSC	134	C++ Programming	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3
CSC	233	Advanced C Programming	4

Major Electives 2

Select 3 hours from the following courses

CSC	139	Visual BASIC Programming	3
CTS	220	Advanced Hardware/Software Support	3
DFT	151	CAD I	3
ELC	128	Intro to PLCs	3
PCI	170	DAQ and Control	4

Graduation Requirements ..... 73 Credit Hours

*May substitute MAT 161 or MAT 171.

Work-based learning or an equivalent is required for graduation. Students must have approval from the Program Director. The work-based learning period may be taken over two semesters with 10 hours each semester as WBL 111 and WBL 121.

CONSTRUCTION EQUIPMENT SYSTEMS TECHNOLOGY

Construction Equipment Systems 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.

Construction Equipment Systems Technology Degree - A60450

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

HET	110	Diesel Engines	6
HET	114	Power Trains	5
HET	125	Preventative Maintenance	2
HET	134	Mechanical Fuel Injection	3
HYD	134	Hydraulic/Hydrostatic Construction	4
PME	117	Equipment Braking Systems	3
PME	118	Undercarriage Components	2
PME	211	Advanced Equipment Repair	4
PME	221	Construction Equipment Servicing	2
TRN	110	Intro to Transportation Tech	2
TRN	120	Basic Transportation Electricity	5
TRN	120A	Basic Transportation Electricity Lab	1
TRN	140	Transportation Climate Control	2
TRN	170	PC Skills for Transportation	2

Major Electives 1

Select 6 hours from the following courses

ELN	110	Survey of Electronics	3
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	2

Major Electives 2

Select 2 hours of the following courses

HYD	110	Hydraulics/Pneumatics I	3
HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Medium/Heavy Duty	2

Major Electives 3

Select 2 hours from the following courses

WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WLD	112	Basic Welding Processes	2

Graduation Requirements ..... 69 Credit Hours

Construction Equipment Systems Technology Diploma - D60450

General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

HET	110	Diesel Engines	6
HET	114	Power Trains	5
HET	134	Mechanical Fuel Injection	3
HYD	134	Hydraulic/Hydrostatic Construction	4
PME	117	Equipment Braking Systems	3
PME	118	Undercarriage Components	2
PME	221	Construction Equipment Servicing	2
TRN	110	Intro to Transportation Tech	2
TRN	120	Basic Transportation Electricity	5
TRN	120A	Basic Transportation Electricity Lab	1
TRN	140	Transportation Climate Control	2
TRN	170	PC Skills for Transportation	2

Major Electives

Select 4 hours from the following courses

ELN	110	Survey of Electronics	3
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	2

Graduation Requirements ..... 47 Credit Hours

Hydraulics, Engines, and Transmissions Certificate- C60450BB

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

Major Electives

Select 2 hours of the following courses

HYD	110	Hydraulics/Pneumatics I	3
HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Medium/Heavy Duty	2

Completion Requirements ..... 13 Credit Hours

Fuel Injection, Electrics, & Electronics Certificate – C60450BC

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	134	Mechanical Fuel Injection	3
TRN	120	Basic Transportation Electricity	5
TRN	120A	Basic Transportation Electricity Lab	1

Major Electives

Select 4 hours from the following courses

ELN	110	Survey of Electronics	3
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	2

Completion Requirements ..... 13 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 Degree - A35190

General Education Courses

COM	120	Intro Interpersonal Com	3
ENG	111	Expository Writing	3
HUM	110	Technology and Society	3
MAT	121	Algebra and Trigonometry	3
PSY	150	General Psychology	3

Major Courses

ACC	120	Prin of Financial Acct	4
BPR	130	Blueprint Reading/Const	3
BPR	230	Commercial Blueprints	2
BUS	139	Entrepreneurship I	3
CMT	112a	Construction Management I, Pt 1	3
CMT	112b	Construction Management I, Pt 2	3
CMT	120	Codes and Inspections	3
CMT	193	Selected Topics	3
CMT	210	Prof Construction Superv	3
CMT	212	Total Safety Performance	3
CMT	214	Planning and Scheduling	3
CMT	218	Human Relations Issues	3
CMT	226	Applications Project*	3
CST	131	OSHA/Safety/Certification	3
CST	241	Planning/Estimating I	3
CST	242	Planning/Estimating II	4

SST 140 Green Building and Design Concepts..... 3
Graduation Requirements.....67 Credits Hours

*A work-based learning option may be available. Please see your advisor.

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..... 3
BPR 230 Commercial Blueprints..... 2
CMT 210 Construction Management Fund..... 3
CMT 212 Total Safety Performance..... 3
CMT 214 Planning and Scheduling..... 3
CMT 218 Human Relations Issues..... 3
Completion Requirements .....17 Credit Hours

Construction Management Technology: Basic Construction Estimating – C35190D

BPR 130 Blueprint Reading/Cost..... 3
BPR 230 Commercial Blueprints..... 2
CMT 193 Selected Topics..... 3
CMT 210 Construction Management Fund..... 3
CST 241 Planning/Estimating I..... 3
CST 242 Planning/Estimating II..... 4
Completion Requirements .....18 Credit Hours

Construction Management Technology: Construction Safety Management – C35190E

BPR 130 Blueprint Reading/Cost..... 3
BPR 230 Commercial Blueprints..... 2
CMT 210 Construction Management Fund..... 3
CMT 212 Total Safety Performance..... 3
CMT 218 Human Relations Issues..... 3
CST 131 OSHA/Safety/Certification..... 3
Completion Requirements .....17 Credit Hours

DIESEL AND HEAVY EQUIPMENT TECHNOLOGY

The Diesel and Heavy Equipment 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.

Diesel and Heavy Equipment Technology Degree - A60460

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
HET 110 Diesel Engines..... 6
HET 114 Power Trains..... 5
HET 125 Preventative Maintenance..... 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
PME 211 Advanced Equipment Repair..... 4
TRN 110 Intro to Transportation Tech..... 2
TRN 120 Basic Transportation Electricity..... 5
TRN 120A Basic Transportation Electricity Lab..... 1
TRN 140 Transportation Climate Control..... 2
TRN 170 PC Skills for Transportation..... 2

Major Electives 1
Select 6 hours from the following courses
ELN 110 Survey of Electronics..... 3
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..... 2

Major Electives 2
Select 2 hours from the following courses
HYD 110 Hydraulics/Pneumatics I..... 3
HYD 111 Mobile Hydraulic Systems..... 3
HYD 112 Hydraulics/Medium/Heavy Duty..... 2

Major Electives 3
Select 2 hours from the following courses
WBL 111 Work-Based Learning I..... 1
WBL 112 Work-Based Learning I..... 2
WLD 112 Basic Welding Processes..... 2
Graduation Requirements ..... 69 Credit Hours

Diesel and Heavy Equipment Technology Diploma - D60460

General Education Courses
ENG 110 Freshman Composition..... 3
PSY 118 Interpersonal Psychology..... 3

Major Courses

HET	110	Diesel Engines	6
HET	114	Power Trains	5
HET	125	Preventative Maintenance	2
HET	134	Mechanical Fuel Injection	3
HET	231	Medium/Heavy Duty Brake System	2
HET	232	Medium/Heavy Duty Brake System Lab	1
HYD	134	Hydraulic/Hydrostatic Construction	4
TRN	110	Intro to Transportation Tech	2
TRN	120	Basic Transportation Electricity	5
TRN	120A	Basic Transportation Electricity Lab	1
TRN	140	Transportation Climate Control	2
TRN	170	PC Skills for Transportation	2

Major Electives 1

Select 2 hours from the following courses

HYD	110	Hydraulics/Pneumatics I	3
HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Medium/Heavy Duty	2

Major Electives 2

Select 4 hours from the following courses

ELN	110	Survey of Electronics	3
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	2

Graduation Requirements ..... 47 Credit Hours

ELECTRICAL SYSTEMS TECHNOLOGY

The Electrical Systems 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 Systems Technology Degree - A35130

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	Residential Wiring	4
ELC	114	Commercial Wiring	4
ELC	115	Industrial Wiring	4
ELC	117	Motors and Controls	4
ELC	118	National Electrical Code	2
ELC	119	NEC Calculations	2
ELC	121	Electrical Estimating	2
ELC	126	Electrical Computations	3
ELC	128	Introduction to PLC	3
ELC	134	Transformer Applications	2
ELC	229	Applications Project*	2
ELN	133	Digital Electronics	4
ELN	229	Industrial Electronics	4
ISC	112	Industrial Safety	2

Graduation Requirements ..... 65 Credit Hours

*Work-based learning option may exist. Please see your advisor.

Electrical Systems Technology Diploma - D35130

The Electrical Systems 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	Residential Wiring	4
ELC	114	Commercial Wiring	4
ELC	115	Industrial Wiring	4
ELC	117	Motors and Controls	4
ELC	118	National Electrical Code	2
ELC	119	NEC Calculations	2
ELC	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

Electrical Systems Technology Certificate – C35130

ELC	113	Residential Wiring	4
ELC	114	Commercial Wiring	4
ELC	118	National Electrical Code	2
ELC	119	NEC Calculations	2

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.

APPLIED ENGINEERING & TECHNOLOGIES

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 Degree - A40200

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM	110	Technology and Society	3
MAT	121	Algebra and Trigonometry*	3
PSY	118	Interpersonal Psychology	3

Major Courses

CSC	133	C Programming	3
EGR	115	Introduction to Technology	3
ELC	128	Intro to PLC's	3
ELC	131	Circuit Analysis I	4
ELC	131A	Circuit Analysis I Lab	1
ELN	131	Analog Electronics I	4
ELN	132	Analog Electronics II	4
ELN	133	Digital Electronics	4
ELN	232	Introduction to Microprocessors	4
ELN	233	Microprocessor Systems	4
ELN	235	Data Communication Systems	4
ELN	275	Troubleshooting	2
PCI	170	DAQ and Control	4
WBL	112	Work-Based Learning I	2

Major Electives

Select 3 hours from the following courses

ATR	214	Advanced PLCs	4
ATR	215	Sensors and Transducers	3
DFT	151	CAD I	3
ELN	236	Fiber Optics and Lasers	4
PCI	163	Process Control Circuits	4
PCI	171	Fieldbus Systems	4
PCI	172	SCADA Systems	4
PCI	261	Process Measurement	3
PCI	262	Intro to Process Control	4
WBL	111	Work-Based Learning I	1

Graduation Requirements ..... 73 Credit Hours

*May substitute MAT 161 or MAT 171.

Work-based learning or an equivalent is required for graduation. Students must have approval from the program director. The work-based learning period may extend over two semesters with 10 hours each semester as WBL 111 and WBL 121.

Basic Electronics Certificate - 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.

ELC	131	Circuit Analysis I	4
ELC	131A	Circuit Analysis I Lab	1
ELN	131	Analog Electronics I	4
ELN	133	Digital Electronics	4
ELN	275	Troubleshooting	2

Completion Requirements ..... 15 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
ELC	128	Intro to PLC's	3
ELN	131	Analog Electronics I	4
ELN	133	Digital Electronics	4

Completion Requirements ..... 15 Credit Hours

SCADA Systems Certificate - C40200E

ATR	214	Advanced PLCs	4
PCI	170	DAQ and Control	4
PCI	171	Fieldbus Systems	4
PCI	172	SCADA Systems	4

Completion Requirements ..... 16 Credit Hours

Instrumentation Certificate - C40200F

ATR	215	Sensors and Transducers	3
PCI	170	DAQ and Control	4
PCI	261	Process Measurement	3
PCI	262	Intro to Process Control	4

Completion Requirements ..... 14 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 Degree - A20140

General Education Courses

COM	120	Intro to Interpersonal Communication	3
ENG	111	Expository Writing	3
HUM	110	Technology and Society	3
MAT	110	Mathematical Measurement	3
PSY	118	Interpersonal Psychology	3

Major Courses

BIO	111	General Biology I	4
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	110	Environmental Science	3
ENV	110A	Environmental Science Lab	1
ENV	120	Earth Science	4
ENV	193	Selected Topics	3
ENV	210	Management of Waste	4
ENV	212	Instrumentation	4
ENV	214	Water Quality	4
ENV	218	Environmental Health	3
ENV	220	Applied Ecology	4
ENV	226	Air Quality	3
ISC	121	Environmental Health and Safety	3

Major Electives

(Select 6.0 hours from the following courses)

BPM	110	Bioprocess Practices	5
ENV	112	Environmental Education I	3
ENV	114	Environmental Education II	3
ENV	232	Site Assessment and Remediation	3
GIS	111	Introduction to GIS	3
GIS	112	Introduction to GPS	3
PTC	110	Industrial Environment	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning II	2

Graduation Requirements ..... 72 Credit Hours

Environmental Education Certificate - C20140A

Major Courses

ENV	110	Environmental Science	3
ENV	110A	Environmental Science Lab	1
ENV	214	Water Quality	4
ENV	218	Environmental Health	3
ENV	220	Applied Ecology	4

Graduation Requirements ..... 15 Credit Hours

GEOMATICS TECHNOLOGY

The Geomatics 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.

Geomatics Technology Degree - A40420

General Education Courses

COM	120	Intro to Interpersonal Communication	3
ENG	111	Expository Writing	3
HUM	110	Technology and Society	3
MAT	121	Algebra and Trigonometry	3
PSY	118	Interpersonal Psychology	3

Major Courses

CEG	115	Intro to Tech and Sustainability	3
CEG	151	CAD for Engineering Tech	3
CEG	211	Hydrology and Erosion Control	3
CEG	230	Subdivision Planning and Design	3
CIV	125	Civil/Surveying CAD	3
CIV	215	Highway Technology	3
GIS	111	Introduction to GIS	3
GIS	112	Introduction to GPS	3
GIS	120	Intro to Geodesy	3
GIS	121	Georeferencing and Mapping	3
SRV	110	Surveying I	4
SRV	111	Surveying II	4
SRV	210	Surveying III	4
SRV	220	Surveying Law	3
SRV	240	Topo/Site Surveying	4
SRV	250	Advanced Surveying	4
SRV	260	Field and Office Practices	2
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 72 Credit Hours

Geomatics Technology: CAD Certificate – C40420A

Major Courses

CEG	115	Intro to Tech and Sustainability	3
CEG	151	CAD for Engineering Tech	3
CIV	125	Civil/Surveying CAD	3
GIS	111	Introduction to GIS	3
GIS	112	Introduction to GPS	3

Graduation Requirements ..... 15 Credit Hours

Geomatics Technology: Field Technician Certificate – C40420B

Major Courses

CIV	215	Highway Technology	3
SRV	110	Surveying I	4
SRV	111	Surveying II	4
SRV	210	Surveying III	4

Graduation Requirements ..... 15 Credit Hours

Geomatics Technology: Design Certificate – C40420C

Major Courses

CEG	211	Hydrology and Erosion Control	3
CEG	230	Subdivision Planning and Design	3
SRV	240	Topo/Site Surveying	4
SRV	250	Advanced Surveying	4

Graduation Requirements ..... 14 Credit Hours

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 Degree - A40240

General Education Courses

COM	120	Intro to Interpersonal Communication	3
ENG	111	Expository Writing	3
HUM	110	Technology and Society	3
MAT	121	Algebra and Trigonometry	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

DFT	151	CAD I	3
DFT	152	CAD II	3
DFT	154	Intro to Solid Modeling	3
EGR	115	Introduction to Technology	3
EGR	285	Design Project	2
ISC	121	Environmental Health and Safety	3
ISC	132	Manufacturing Quality Control	3
ISC	135	Principles of Industrial Management	4
ISC	136	Productivity Analysis I	3
ISC	243	Production and Operations Management I	3
ISC	255	Engineering Economy	3
ISC	277	Quality Technology	4
MEC	161	Manufacturing Processes I	3
MEC	180	Engineering Materials	3

Major Electives

(Select 3.0 hours from the following courses)

ISC	175	QA Fundamentals	1
ISC	237	Quality Management	3
ISC	278	cGMP Quality Systems	2
ISC	280	Validation Fundamentals	2
PTC	222	Pharmaceutical Process Control	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning II	2

Graduation Requirements ..... **65 Credit Hours**

Industrial Management Certificate - 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	121	Industrial Health and Safety	3
ISC	132	Manufacturing Quality Control	…3
ISC	135	Principles of Industrial Management	4
ISC	243	Production and Operations Management I	3
MEC	161	Manufacturing Processes I	3

Completion Requirements ..... **16 Credit Hours**

Advanced Quality Assurance Certificate - 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**

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 Degree - A30220

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM	110	Technology and Society	3
MAT	110	Math Measurement and Literacy	3
PSY	150	General Psychology	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	225	Architectural BIM I	2
ARC	225A	Architectural BIM I Lab	1
DES	125	Graphic Presentation I	2
DES	135	Principles & Elements of Design	4

DES	210	Business Practices for Interior Design	2
DES	220	Principles of Interior Design	3
DES	225	Textiles and Fabrics	3
DES	230	Residential Deign I	3
DES	235	Products	3
DES	240	Commercial and Contract Design	3
DES	255	History of Interior & Furnishings I	3
DES	256	History of Int Design II	3
DES	264	Digital Architecture	2
DES	265	Lighting and Interior Design	2
DES	280	Codes and Standards/Int Design	3
DES	285	Capstone	4

Major Electives

Select 2 hours from the following courses

BUS	151	People Skills	3
BUS	260	Business Communication	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	121	Work-Based Learning II	1

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 Degree - A40260

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM	115	Critical Thinking	3
MAT	121	Algebra and Trigonometry	3
PSY	118	Interpersonal Psychology	3

Major Courses

ARC	114	Architectural CAD	2
ARC	114A	Architectural CAD Lab	1
ARC	220	Advanced Architectural CAD	2
ARC	240	Site Planning	3
ARC	264	Digital Architecture	2
CIV	125	Civil/ Surveying CAD	3
ENV	110	Environmental Science	3
GIS	111	Introduction to GIS	3
LAR	111	Intro to Landscape Architectural Tech	3
LAR	112	Landscape Materials and Methods	4
LAR	113	Residential Landscape Design	3
LAR	211	Commercial Site Design	3
LAR	223	Landscape Design Project	4
LAR	230	Principles of Exterior Planting	4
LAR	231	Principles of Interior Planting	3
LAR	250	Survey of Landscape Architecture	3
SRV	110	Surveying I	4

Major Electives

Select 2 hours from the following courses

ARC	221	Architectural 3-D CAD	3
ARC	225	Architectural BIM I	2
ARC	225A	Architectural BIM I Lab	1
ARC	235	Architectural Portfolio	3
ARC	241	Contract Administration	2
LAR	120	Sustainable Development	3
LAR	235	LAR Presentation Techniques	3
LAR	241	Advanced Site Planning	3
LAR	242	Planning and Environment	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 67 Credit Hours

Landscape Architecture Certificate - 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

Landscape Architecture Digital Technology Certificate – C40260D

ARC	114	Architectural CAD	2
ARC	114A	Architectural CAD Lab	1
ARC	220	Advanced Architectural CAD	2
ARC	264	Digital Architecture	2
CIV	125	Civil/ Surveying CAD	3
GIS	111	Introduction to GIS	3

Completion Requirements ..... 13 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 Degree - A50340

General Education Courses

COM	120	Interpersonal Communications	3
ENG	110	Freshman Composition	3

HUM	110	Technology and Society	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3

Major Courses

ARC	111	Introduction to Architectural Technology	3
DFT	111	Technical Drafting I	2
DFT	112	Technical Drafting II	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	251	Customizing CAD Software	3
DFT	253	CAD Data Management	3
DFT	254	Intermediate Solid Model/Render	3
EGR	115	Introduction to Technology	3
EGR	285	Design Project	2
GIS	111	Introduction to GIS	3
ISC	121	Environmental Health and Safety	3
ISC	135	Principles of Industrial Management	4
MEC	130	Mechanisms	3
MEC	161	Manufacturing Processes I	3
MEC	180	Engineering Materials	3

Major Electives

Select 2 hours from the following courses

BPR	130	Print Reading/Const	3
MEC	130	Mechanisms	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 66 Credit Hours

Mechanical Drafting Technology Diploma - D50340

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

ARC	111	Introduction to Architectural Technology	3
DFT	111	Technical Drafting I	2
DFT	112	Technical Drafting II	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	254	Intermediate Solid Model/Render	3
EGR	115	Introduction to Technology	3
EGR	285	Design Project	2
ISC	121	Environmental Health and Safety	3
ISC	135	Principles of Industrial Management	4
MEC	161	Manufacturing Processes I	3

Major Electives

Select 2 hours from the following courses

BPR	130	Print Reading/Const	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 47 Credit Hours

Mechanical Drafting Technology Certificate - 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	151	CAD I	3
DFT	152	CAD II	3
DFT	153	CAD III	3
DFT	154	Intro to Solid Models/Rendering	3

Completion Requirements ..... 14 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 Degree - A40320

General Education Courses

ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM	110	Technology and Society	3
MAT	121	Algebra/Trigonometry I	3
PHY	131	Physics-Mechanics	4
PSY	118	Interpersonal Psychology	3

Major Courses

DFT	121	Introduction to GD&T	2
DFT	151	CAD I	3
DFT	154	Intro Solid Modeling (ProE)	3
EGR	115	Introduction to Technology	3
EGR	251	Statics	3
EGR	252	Strength of Materials	3
EGR	285	Design Project	2

ISC	132	Manufacturing Quality Control	3
ISC	255	Engineering Economy	3
MEC	130	Mechanisms	3
MEC	161	Manufacturing Processes I	3
MEC	180	Manufacturing Materials	3
MEC	265	Fluid Mechanics	3
MEC	267	Thermal Systems	3

Major Elective
Select 3 hours from the following courses

ARC	225	Architectural BIM I	2
ARC	225A	Architectural BIM I Lab	1
ENV	110	Environmental Science	3
ELC	128	Introduction to PLC	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 65 Credit Hours

Mechanical Design Certificate - C40320B

Study of design elements for CAD users.

DFT	151	CAD I	3
DFT	154	Intro Solid Modeling (ProE)	3
MEC	130	Mechanisms	3
MEC	180	Manufacturing Materials	3

Completion Requirements .....12 Credit Hours

Thermal Mechanics Certificate - C40320C

The Thermal Mechanics Certificate provides a refresher or a concentration in thermal sciences.

DFT	154	Intro Solid Modeling (ProE)	3
MEC	180	Engineering Materials	3
MEC	265	Fluid Mechanics	3
MEC	267	Thermal Systems	3

Completion Requirements .....12 Credit Hours

Materials Engineering Certificate - C40320D

The Materials Engineering Certificate will provide students with an understanding of engineering materials and processes.

DFT	151	CAD I	3
MEC	130	Mechanisms	3
MEC	161	Manufacturing Processes I	3
MEC	180	Engineering Materials	3

Completion Requirements .....12 Credit Hours

Engineering Management Certificate - C40320E

The Engineering Management Certificate will help students understand management tools in engineering.

DFT	151	CAD I	3
EGR	115	Introduction to Technology	3
ISC	132	Manufacturing Quality Control	3
ISC	135	Principles of Industrial Management	4
ISC	255	Engineering Economy	3

Completion Requirements ..... 16 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 Diploma - D35300

General Education Courses

ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3

Major Courses

BPR	130	Blueprint Reading/Construction	3
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	160	Plumbing Estimates	2
PLU	192	Selected Topics	2
SST	140	Green Building and Design Concepts	3

Graduation Requirements ..... 44 Credit Hours

Plumbing Concepts I Certificate - C35300D

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	3
PLU	110a	Modern Plumbing Part 1	4
PLU	110b	Modern Plumbing Part 2	5
PLU	140	Introduction to Plumbing Codes	2

Completion Requirements..... 14 Credit Hours

Plumbing Concepts II Certificate - C35300E

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

PLU	120a	Plumbing Applications Part 1	4
PLU	120b	Plumbing Applications Part 2	5
PLU	150	Plumbing Diagrams	2
PLU	160	Plumbing Estimates	2

Completion Requirements ..... 13 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 Degree - A50420

General Education Courses

COM	110	Intro to Communication	3
ENG	110	Freshman Composition	3
HUM	110	Technology and Society	3
MAT	110	Mathematical Measurement	3
PSY	118	Interpersonal Psychology	3

Major Courses

DFT	151	CAD I	3
DFT	253	CAD Data Management	3
ELC	127	Software for Technicians	2
ISC	112	Industrial Safety	2
MEC	161	Manufacturing Processes I	3
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	122	GMAW (MIG) Plate	3
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
WLD	262	Inspection and Testing	3

Major Elective

Select 1 hour from the following courses

ACA	220	Professional Transition	1
WLD	112	Basic Welding Processes	2

Graduation Requirements ..... 66 Credit Hours

Welding Technology Diploma - D50420

General Education Courses

ENG	110	Freshman Composition	3
MAT	110	Mathematical Measurement	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	122	GMAW (MIG) Plate	3
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
WLD	262	Inspection and Testing	3

Graduation Requirements ..... 43 Credit Hours

Welding Technology Certificate - C50420

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	110	Cutting Processes	2
WLD	115	SMAW (Stick) Plate	5
WLD	121	GMAW (MIG) FCAW/Plate	4
WLD	141	Symbols and Specifications	3

Completion Requirements ..... 14 Credit Hours

BUSINESS & PUBLIC SERVICE TECHNOLOGIES

Business & Public Services Technologies Division

Dean Walter Martin
Phone: 919-866-5672
Email: wmartin@waketech.edu

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.

1. Click on the "**Program Name**" to go to the program's web page
2. Click on the "**Program of Study**" to see specific course requirements for that program

Programs may be offered during the day, evening, online, or a combination. Students should refer to WebAdvisor for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully online.

Program Names	Program Code
Accounting – ***AAS Degree***	A25100
Accounting – ***Diploma***	D25100
Accounting: Core – ***Certificate***	C25100C
Income Tax Preparer – ***Certificate***	C25100B
Payroll Accounting Clerk - ***Certificate***	C25100A
Baking and Pastry Arts – ***AAS Degree***	A55130
Baking and Pastry Arts – ***Diploma***	D55130
Baking and Pastry Arts - ***Certificate***	C55130A
Business Administration – ***AAS Degree***	A25120
Business Core – ***Certificate***	C25120D
Career Success – ***Certificate***	C25120G
Customer Service – ***Certificate***	C25120B
Entrepreneurship – ***Certificate***	C25120C
International Marketing - ***Certificate***	C25120M
Leadership - ***Certificate***	C25120F
Sales Development - ***Certificate***	C25120A
Business Administration/Human Resources Management – ***AAS Degree***	A2512C
Business Administration/Human Resources Management: Core - ***Certificate***	C2512CA
Business Administration/Human Resources Administration - ***Certificate***	C2512CB
Business Analytics – ***AAS Degree***	A25350
Business Intelligence – ***Certificate***	C25350A
Business Analyst – ***Certificate***	C25350B
Marketing Analytics – ***Certificate***	C25350C
Database Analytics – ***Certificate***	C25350D
Logistics Analytics – ***Certificate***	C25350E
Finance Analytics - ***Certificate***	C25350F
Cosmetology – ***AAS Degree***	A55140
Cosmetology - ***Diploma***	D55140A
Criminal Justice Technology – ***AAS Degree***	A55180
Principles of Correction - ***Certificate***	C55180A
Criminal Justice Technology/Latent Evidence – ***AAS Degree***	A5518A
Principles of Identification and Information - ***Certificate***	C5518A
Culinary Arts – ***AAS Degree***	A55150
Culinary Arts – ***Diploma***	D55150
Culinary Arts - ***Certificate***	C55150A
Early Childhood Education – ***AAS Degree***	A55220
Early Childhood Education – ***Diploma***	D55220A
Early Childhood Education – ***Certificate***	C55220D
Infant/Toddler Care - ***Certificate***	C55220C
School-Age – ***Certificate***	C55220E
Esthetics Technology - ***Certificate***	C55230

Program Names Continued	Program Code
Fire Protection Technology – ***AAS Degree***	A55240
Fire Protection Technology: Basic – ***Certificate***	C55240A
Loss Control/Investigation – ***Certificate***	C55240B
Fire Management – ***Certificate***	C55240C
Food Service Technology – ***Diploma***	D55250
Food Service Technology - ***Certificate***	C55250
Global Logistics Technology – ***AAS Degree***	A25170
Global Logistics Technology: Basic – ***Certificate***	C25170A
Distribution Management - ***Certificate***	C25170B
Hospitality Management – ***AAS Degree***	A25110
Hospitality Management – ***Diploma***	D25110A
Hospitality Event Management – ***Certificate***	C25110A
Hospitality Hotel Management – ***Certificate***	C25110B
Hospitality Entrepreneur – ***Certificate***	C25110C
Hospitality Restaurant Management - ***Certificate***	C25110D
Lateral Entry - ***Certificate***	C55430

***Collaborative Agreements**

None at this time

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 Degree - A25100

-Day, Evening, and Online

General Education Courses

ACA	220	Professional Transition	1
ENG	111	Writing and Inquiry	3
ENG	114	Professional Research and Reporting	3
HUM	115	Critical Thinking	3
PSY	150	General Psychology	3
		Mathematics Elective	3

Math Electives

Select 3 credit hours from the following courses:

MAT	110	Math Measurement and Literacy	3
MAT	143	Quantitative Literacy	3

Major Courses

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
ACC	129	Individual Income Taxes	3
ACC	130	Business Income Taxes	3
ACC	140	Payroll Accounting	2
ACC	149	Introduction to Accounting Spreadsheets	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
BUS	115	Business Law I	3
CIS	111	Basic PC Literacy	2
ECO	151	Survey of Economics	3
OR			
ECO	251	Principles of Microeconomics	3
OR			
ECO	252	Principles of Macroeconomics	3
		Major Elective List I	3
		Major Elective List II	8

Major Elective List I

Select 3 credit hours from the following courses:

BUS	121	Business Math	3
BUS	125	Personal Finance	3

Major Elective List II

Select 8 credit hours from the following courses:

ACC	122	Principles of Financial Accounting II	3
ACC	132	NC Business Taxes	2
ACC	151	Accounting Spreadsheet Applications	2
ACC	152	Advanced Software Applications	2
ACC	225	Cost Accounting	3
ACC	227	Practices in Accounting	3
ACC	240	Governmental & Not-for-Profit Accounting	3
ACC	268	Information Systems and Internal Controls	3
ACC	269	Auditing and Assurance Services	3
BUS	116	Business Law II	3
BUS	225	Business Finance	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	121	Work-Based Learning II	1

Graduation Requirements ..... 66 Credit Hours

Accounting 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	Writing and Inquiry	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	Introduction 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	215	Ethics in Accounting	3
ACC	240	Governmental and Not-for-Profit Accounting	3
ACC	268	Information Systems & Internal Controls	3
BUS	125	Personal Finance	3
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based Learning I	2
WBL	121	Work-Based Learning II	1

Graduation Requirements ..... 36 Credit Hours

Accounting Core Certificate - C25100C

-Day, Evening, and Online

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.

ACC	120	Principles of Financial Accounting	4
ACC	121	Principles of Managerial Accounting	4
BUS	115	Business Law I	3
ECO	151	Survey of Economics	3
OR			
ECO	251	Principles of Microeconomics	3
OR			
ECO	252	Principles of Macroeconomics	3
ENG	111	Writing and Inquiry	3

Graduation Requirements ..... 17 Credit Hours

Income Tax Preparer Certificate - 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 Certificate - 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 Degree - A55130

-Day Only

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	3
MAT	110	Math Measurement & Literacy	3
PSY	118	Interpersonal Psychology	3
		Humanities/Fine Arts 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
WBL	112	Work-Based Learning I	2
CUL	110	Sanitation and Safety	2
CUL	112	Nutrition for Foodservice	3
CUL	140	Culinary Skills I	5
CUL	160	Baking I	3
CUL	260	Baking II	3
CUL	170	Garde-Manger I	3
HRM	245	Human Resources Management Hosp	3

Humanities/Fine Arts Electives (Select 3 credit hours from the following courses):

HUM	115	Critical thinking	3
ART	113	Art Methods and Materials	3

Graduation Requirements ..... 71 Credit Hours

Baking and Pastry Arts Diploma - D55130

-Day Only

The Baking and Pastry Arts diploma includes basic and more advanced courses to help prepare students for entry into the baking field or to advance in their current foodservice positions.

Courses address both the art and the science of baking. 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.

Course credits are transferable to the Culinary Arts associate degree program.

General Education Courses

ENG	111	Writing and Inquiry	3
MAT	110	Math Measurement & Literacy	3

Major Courses

BPA	150	Artisan & Specialty Breads	4
BPA	210	Cake Design & Decorating	3
BPA	230	Chocolate Artistry	3
BPA	230A	Chocolate Artistry Lab	1
BPA	250	Dessert & Bread Production	5
CUL	110	Sanitation and Safety	2
CUL	140	Culinary Skills I	5
CUL	160	Baking I	3
CUL	260	Baking II	3

Major Electives
Elective List I (Select one from the following list):
CUL 112 Nutrition for Foodservice 3
HRM 245 Human Resources Management Hosp..... 3

Elective List II (Select one from the following list):
BPA 120 Petit Fours & Pastries 3
BPA 130 European Cakes & Tortes..... 3
BPA 220 Confection Artistry..... 4

Elective List III (Select one from the following list):
BPA 220 Confection Artistry..... 4
BPA 240 Plated Desserts..... 3
Graduation Requirements ..... 44 Credit Hours

Baking and Pastry Arts Certificate - C55130A

-Day Only

The Baking and Pastry Arts 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.

CUL 110 Sanitation and Safety.....2
CUL 140 Basic Culinary Skills.....5
CUL 160 Baking I 3

Elective List I (Select two of the following courses):
BPA 150 Artisan & Specialty Bread 4
BPA 210 Cakes Design & Decorating..... 3
CUL 260 Baking II 3
Completion Requirements .....16 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 Degree - A25120

-Day, Evening, and Online

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 Sciences 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 116 Business Law II 3
OR
BUS 217 Employment Law and Regulations.....3
BUS 121 Business Math.....3
BUS 137 Principles of Management.....3
BUS 139 Entrepreneurship I 3
BUS 153 Human Resources Management.....3
CIS 110 Introduction to Computers 3
INT 110 International Business 3
MKT 120 Principles of Marketing 3
MKT 221 Consumer Behavior.....3
MKT 224 International Marketing 3
Economics Elective 3
Major Elective 3

Major Electives
Select one courses from the following
BUS 125 Personal Finance..... 3
BUS 148 Survey of Real Estate.... 3
BUS 151 People Skills 3
BUS 234 Training and Development.....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
LOG 110 Introduction to Logistics 3
MKT 123 Fundamentals of Selling 3
MKT 223 Customer Service 3
OST 136 Word Processing 3
OST 137 Office Software Applications 3
OST 140 Internet Communication/Research.....2
OST 184 Records Management.....3
Completion Requirements .....64 Credit Hours

Business Administration: Business Core Certificate - C25120D

-Day, Evening, and Online

This certificate provides students who are earning the Business Administration A.A.S., Business Administration/Human Resources Management A.A.S., and/or Associate in Art two-year degree, or simply to improve their skills in a specific area, to earn a certificate comprised of our Business Core courses. In as little as one semester, one can earn a certificate that validates an area of expertise, which can set an individual apart in the interview and selection process. If pursuing an Associate in Art degree or transferring to a four-year university, all of these classes will qualify to transfer.

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 151 Survey of Economics.....3
OR
ECO 251 Principles of Microeconomics.....3
OR
ECO 252 Principles of Macroeconomics.....3
Completion Requirements.....16 Credit Hours

Career Success Certificate - C25120G
-Online

This certificate is designed to help students develop the knowledge and skills they need to make the successful transition from college to career. The program includes courses on the job search, managing personal finances, successful communication, and interpersonal skill development, as well as a course in business. Together, these courses address the "employability skills" that are in high demand from employers today. A student will need to be sure that they are ready to find and succeed in a great job with this professional transition toolkit.

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 Certificate - C25120B
-Day

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 collections 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

Entrepreneurship Certificate - C25120C
-Day

This program enables students to recognize business opportunities and develop a business plan for the purpose of securing financing for an entrepreneurial 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	4
MKT	120	Principles of Marketing	3

Completion Requirements ..... 12 Credit Hours

International Marketing Certificate – C25120M – Day

This certificate introduces innovative marketing concepts focusing on entrepreneurship combined with the marketing skills necessary for today's highly competitive and international environment. Focusing on core marketing competencies, students are introduced to theories and practices necessary to meet the international challenges and opportunities faced by today's marketers. The International Marketing certificate is an exciting opportunity to learn the new marketing skills necessary for competition in today's global economy.

Major Courses

BUS	139	Entrepreneurship	3
INT	110	International Business	3
MKT	120	Principles of Marketing	3
MKT	221	Consumer Behavior	3
MKT	224	International Marketing	3

Completion Requirements ..... 15 Credit Hours

Leadership Certificate - C25120F
-Day, Evening, and Online

This certificate is designed to be an overview of the major functions of leadership and management with an emphasis on critical thinking. Emphasis is placed on exploring the theories and techniques of leadership and teamwork coupled with the management principles of planning, organizing, controlling, directing, and communicating. Students will be able to identify and analyze a personal philosophy and style of leadership and integrate these concepts in various practical situations using moral and ethical judgments honed during this program. Upon completion, students should be able to work as contributing members of a team utilizing these functions of leadership and management.

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 Certificate - C25120A
- Day & 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 approach activities, specific strategies for handling objections, ways to gain an interview, demonstration tools, and closing methods. The program includes both retail selling and industrial selling as well as 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

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 Management 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 Degree -A2512C

-Day, Evening, and Online

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
		Psychology/Sociology 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	153	Human Resources 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

***Non-waiverable pre-requisites for BUS 259 HRM Applications**

Major Elective

Select one course from the following

BUS	125	Personal Finance	3
BUS	139	Entrepreneurship I	3
BUS	148	Survey of Real Estate	3
BUS	151	People Skills	3
BUS	260	Business Communications	3
COE	111	Co-op Work Experience I	1
INT	110	International Business	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	2
OST	184	Records Management	3

Graduation Requirements ..... 64 Credit Hours

Business Administration/Human Resources Administration Certificate - C2512CB

-Day and Online

This certificate is intended to provide formal classroom training in Human Resources (HR) to individuals interested in careers in HR. Ideally, students entering this program should already have a college degree in another field, should be working in the field of Human Resources, or should be business owners looking for specific training in Human Resources. Course work includes studies in human resource management, records management, recruitment and selection or compensation and benefits or training and development, people skills or customer service, and word processing or office software applications.

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	184	Records Management	3

Completion Requirements..... 15 Credit Hours

Business Administration/Human Resources Management Certificate- C2512CA

-Day and Online

This program is intended to provide formal classroom training in Human Resources Management to individuals interested in careers in Human Resources. Ideally, students entering this program should already have a college degree in another field, should be working in the field of Human Resources, or should be business owners looking for specific training in Human Resources. Course work includes studies in business, management, business and human resource law, recruitment and selection, training and development, compensation and benefits, people skills, organizational psychology, accounting and payroll, and technology.

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

BUSINESS ANALYTICS

The Business Analytics curriculum is designed to provide students with the knowledge and the skills necessary for employment and growth in analytical professions. Business analysts process and analyze essential information about business operations and also assimilate data for forecasting purposes.

Students will complete course work in business analytics, including general theory, best practices, data mining, data warehousing, predictive modeling, project and operations management, statistical analysis, and software packages. Related skills include business communication, critical thinking and decision making.

Graduates should qualify for employment as data technicians, data scientists, business and data analytics engineers, and business analysts in the fields of finance, banking, logistics, marketing, healthcare, manufacturing, information technology, and government organizations.

Business Analytics Degree - A25350

-Day, Online (One or more courses are delivered in hybrid format)

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	114	Prof Research and Reporting	3
MAT	143	Quantitative Literacy	3
HUM	115	Critical Thinking	3
ECO	251	Prin of Microeconomics	3

Major Courses

BAS	120	Business Analytics I	3
BAS	121	Analytics Methods I	3
BAS	150	Analytics Tools I	3
BAS	220	Business Analytics II	3
BAS	221	Analytics Methods II	3
BAS	250	Analytics Tools II	3
BAS	270	Analytics Practicum	3
BUS	110	Introduction to Business	3
BUS	137	Prin of Management	3
CIS	110	Introduction to Computers	3
CTS	130	Spreadsheet	3
DBA	110	Database Concepts	3
DBA	115	Database Applications	3
MAT	152	Statistical Methods I	4

Major Electives

Elective List I (Select 3 hours from the following courses):

MKT	120	Principles of Marketing	3
ACC	120	Prin of Financial Acct	4
WEB	110	Internet/Web Fundamentals	3
LOG	110	Introduction to Logistics	3

Elective List II (Select 3 hours from the following courses):

MKT	221	Consumer Behavior	3
BUS	225	Business Finance	3
WEB	140	Web Development Tools	3
LOG	215	Supply Chain Management	3

Elective List III (Select 3 hours from the following courses):

BAS	230	Business Analytics III	3
BUS	210	Investment Analysis	3
WEB	250	Database Driven Websites	3
LOG	225	Logistics Systems	4

Completion Requirements ..... 67 Credit Hours

Business Intelligence Certificate - C25350A

-Day, Online (One or more courses are delivered in hybrid format)

Major Courses

BAS	120	Business Analytics I	3
BAS	121	Analytics Methods I	3
BAS	150	Analytics Tools I	3
BAS	220	Business Analytics II	3

Completion Requirements ..... 12 Credit Hours

Business Analyst Certificate - C25350B

-Day, Online (One or more courses are delivered in hybrid format)

Major Courses

BAS	221	Analytics Methods II	3
BAS	230	Business Analytics III	3
BAS	250	Analytics Tools II	3
BAS	270	Analytics Practicum	3

Completion Requirements ..... 12 Credit Hours

Marketing Analytics Certificate - C25350C

-Day, Online (One or more courses are delivered in hybrid format)

Major Courses

BAS	120	Business Analytics I	3
BAS	121	Analytics Methods I	3
BUS	110	Introduction to Business	3
MKT	120	Principles of Marketing	3

Completion Requirements ..... 12 Credit Hours

Database Analytics Certificate - C25350D

-Day, Online (One or more courses are delivered in hybrid format)

Major Courses

BAS	150	Analytics Tools I	3
BAS	220	Business Analytics II	3
DBA	110	Database Concepts	3
DBA	115	Database Applications	3

Completion Requirements ..... 12 Credit Hours

Logistics Analytics Certificate - C25350E

-Day, Online (One or more courses are delivered in hybrid format)

Major Courses

BAS	120	Business Analytics I	3
BAS	121	Analytics Methods I	3
LOG	110	Introduction to Logistics	3
LOG	215	Supply Chain Management	3

Completion Requirements ..... 12 Credit Hours

Finance Analytics Certificate - C25350F

-Day, Online (One or more courses are delivered in hybrid format)

Major Courses

BAS	120	Business Analytics I	3
BAS	121	Analytics Methods I	3
ACC	120	Prin of Financial Acct	4
BUS	225	Business Finance	3

Completion Requirements ..... 13 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 Degree - A55140

-Day

General Education Courses

COM	120	Intro Interpersonal Communication	3
ENG	110	Freshman Composition	3
HUM	115	Critical Thinking	3
MAT	110	Mathematical Measurement	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
COS	223	Contemp Hair Coloring	2
COS	225	Adv Contemp Hair Coloring	2
COS	224	Trichology & Chemistry	2
COS	240	Contemporary Design	2

Graduation Requirements..... 64 Credit Hours

Cosmetology Diploma - D55140A

-Day

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

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 Degree - A55180

-Day & Online

General Education Courses

BIO	161	Intro to Human Biology	3
ENG	111	Writing and Inquiry	3
ENG	114	Prof Research and Reporting	3
HUM	115	Critical Thinking	3
SOC	220	Social Problems	3

Major Courses

CJC	111	Intro to Criminal Justice	3
CJC	112	Criminology	3
CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	131	Criminal Law	3
CJC	141	Corrections	3
CJC	132	Court Procedure and Evidence	3
CJC	212	Ethics and Community Relations	3
CJC	215	Organization and Administration	3
CJC	221	Investigative Principles	4
CJC	222	Criminalistics	3
CJC	225	Crisis Intervention	3
CJC	231	Constitutional Law	3
		Major Elective	9

Major Electives

Select 9 hours from the following courses

CJC	122	Community Policing	3
CJC	214	Victimology	3
CJC	233	Correctional Law	3

Graduation Requirements ..... 64Credit Hours

Principles of Corrections Certificate - C55180A

-Day & Online

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.

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

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 Degree - A5518A

-Day Only

General Education Courses

BIO	161	Intro to Human Biology	3
ENG	111	Writing and Inquiry	3
ENG	114	Prof Research and Reporting	3
HUM	115	Critical Thinking	3
SOC	220	Social Problems	3

Major Courses

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 & Evidence	3
CJC	144	Crime Scene Processing	3
CJC	146	Trace Evidence	3
CJC	212	Ethics and Community Relations	3
CJC	221	Investigative Principles	4
CJC	222	Criminalistics	3
CJC	225	Crisis Intervention	3
CJC	231	Constitutional Law	3
CJC	245	Friction Ridge Analysis	3
CJC	246	Advanced Friction Ridge Analysis	3
SPA	120	Spanish for the Workplace	3

Graduation Requirements ..... 64 Credit Hours

Principles of Identification & Information Certificate - C5518A

-Day & Online

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.

Major Courses

CJC	144	Crime Scene Processing	3
CJC	221	Investigative Principles	4
CJC	245	Friction Ridge Analysis	3
CJC	246	Advanced Friction Ridge Analysis	3

Graduation Requirements 13

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.

Culinary Arts Degree- A55150

-Day Only

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	3
MAT	110	Math Measurement & Literacy	3
PSY	118	Interpersonal Psychology	3
		Humanities/Fine Arts Elective	3

Major Courses

WBL	112	Work-Based Learning I	2
CUL	110	Sanitation and Safety	2
CUL	112	Nutrition for Food Service	3
CUL	135	Food and Beverage Service	2
CUL	135A	Food and Beverage Service Lab	1
CUL	140	Culinary Skills I	5
CUL	160	Baking I	3
CUL	170	Garde-Manger I	3
CUL	230	Global Cuisines	5
CUL	240	Culinary Skills II	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 a minimum of 9 credit hours must be taken from the following lists):

Spring Elective List I (Select one course from the following):

CUL	130	Menu Design	2
CUL	214	Wine Appreciation	2

Fall Elective List (Select one set from the following):

BPA	150	Artisan Breads	4
BPA	210	Cake Design & Decorating	3
OR			
CUL	260	Baking II	3
CUL	270	Garde-Manger II	3
CUL	287	Cultural Experience	3

Spring Elective List II (Select one course from the following):

BPA	150	Artisan & Specialty Bread	1
BPA	210	Cake Design & decorating	1
CUL	287	Cultural Experience	2
WBL	122	Work-Based Learning II	2

Humanities Elective (Select 3 credit hours from the following courses):

HUM	115	Critical Thinking	3
ART	113	Art Methods and Materials	3

Graduation Requirements ..... 72 Credit Hours

Culinary Arts Diploma- D55150

-Day Only

The culinary arts diploma includes basic and more advanced courses to help prepare students for entry into the culinary field or to advance in their current foodservice positions.

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.

Course credits are transferable to the Culinary Arts associate degree program.

General Education Courses

ENG	111	Writing and Inquiry	3
MAT	110	Math Measurement & Literacy	3

Major Courses

CUL	110	Sanitation and Safety	2
CUL	140	Culinary Skills I	5
CUL	160	Baking I	3
CUL	170	Garde-Manger I	3
CUL	240	Culinary Skills II	5
HRM	245	Human Resources Management Hosp	3

Elective List I (Select two courses from the following):

CUL	112	Nutrition for Foodservice	3
HRM	220	Cost Control-Food & Bev	3
HRM	260	Procurement for Hospitality	3

Elective List II (Select 10 credit hours from the following):

BPA	150	Artisan & Specialty Bread	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 Credit Hours

Culinary Arts Certificate - C55150A

-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 Arts associate degree program.

Major Courses

CUL	110	Sanitation and Safety	2
CUL	140	Culinary Skills I	5
CUL	160	Baking I	3
OR			
CUL	170	Garde Manger I	3
CUL	240	Culinary Skills II	5
HRM	245	Human Resource Management Hosp	3

Completion Requirements ..... 18 Credit Hours

EARLY CHILDHOOD EDUCATION

The Early Childhood Education curriculum prepares individuals to work with children from birth through eight in diverse learning environments. Students will combine learned theories with practice in actual settings with young children under the supervision of qualified teachers.

Course work includes child growth and development; physical/ nutritional needs of children; care and guidance of children; and communication skills with families and children. Students will foster the cognitive/language, physical/motor, social/emotional, and creative development of young children.

Graduates are prepared to plan and implement developmentally appropriate programs in early childhood settings. Employment opportunities include child development programs, preschools, public and private schools, recreational centers, Head Start Programs, and school-age programs.

Early Childhood Education Degree - A55220

-Day and Evening

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	3
MAT	110	Math Measurement & Literacy	3
OR			
MAT	143	Quantitative Literacy	3
SOC	210	Introduction to Sociology	3
HUM	115	Critical Thinking	3

Major Courses

EDU	119	Introduction to Early Childhood Education	4
EDU	131	Child, Family, and Community	3
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	146	Child Guidance	3
EDU	151	Creative Activities	3
EDU	153	Health, Safety, and Nutrition	3
EDU	157	Active Play	3
EDU	184	Early Child Intro Pract	2
EDU	221	Children with Exceptionalities	3
EDU	234	Infants, Toddlers, & Twos	3
EDU	251/A	Exploration Activities	4
EDU	261	Early Childhood Administration I	3
EDU	271	Educational Technology	3
EDU	280	Language and Literacy Experiences	3
EDU	282	Early Childhood Literature	3
EDU	284	Early Child Capstone Prac	4

Major Electives (Choose a minimum of 6 credit hours)

EDU	262	Early Childhood Administration II	3
EDU	287	Leadership/Early Child Education	3
EDU	114	Intro to Family Childcare	3

Graduation Requirements ..... 74 Credit Hours

Early Childhood Education Diploma - D55220A

-Day and Evening

The Early Childhood Education diploma prepares individuals to work as assistants with early childhood specialists in children's centers, nursery schools, kindergartens, child development centers, hospitals, institutions, camps, and recreation centers.

General Education Courses

ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
SOC	210	Introduction to Sociology	3

Major Courses

EDU	119	Introduction to Early Childhood Education	4
EDU	131	Child, Family, and Community	3
EDU	144	Child Development I	3
EDU	145	Child Development II	3
EDU	146	Child Guidance	3
EDU	151	Creative Activities	3
EDU	153	Health, Safety, and Nutrition	3
EDU	157	Active Play	3
EDU	184	Early Child Intro Pract	2
EDU	234	Infants, Toddlers, & Twos	3

Graduation Requirements ..... 39 Credit Hours

ECE Certificate - C55220D

-Day, Evening, Online

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 Certificate - C55220E

-Day, Evening , Online

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

Infant/Toddler Care Certificate - C55290

-Day, Evening, Online

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

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 Certificate - 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

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 Degree - A55240

-Day

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	114	Professional Research & Reporting	3
HUM	115	Critical Thinking	3
BIO	161	Introduction to Human Biology	3
SOC	220	Social Problems	3

Major Courses

FIP	120	Intro to Fire Protection	3
FIP	124	Fire Prevention & Public Ed	3
FIP	132	Building Construction	3
FIP	152	Fire Protection Law	3
FIP	220	Fire Fighting Strategies	3
FIP	228	Local Government Finance	3

Other Major Requirements

FIP	128	Detection & Investigation	3
FIP	176	Hazard Material Operations	4
FIP	221	Adv Fire Fighting Strategies	3
FIP	229	Fire Dynamics and Combust	3
FIP	236	Emergency Management	3
FIP	240	Fire Service Supervision	3
FIP	244	Fire Protection Project	3
FIP	276	Managing Fire Services	3

Required Electives

Select 6 credit hours from the following list of courses

FIP	136	Inspection and Codes	3
FIP	164	OSHA Standards	3

Graduation Requirements ..... 64 Credit Hours

Fire Protection Technology: Basic Certificate - 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 prepare 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	229	Fire Dynamics and Combust	3

Graduation Requirements ..... 15 Credit Hours

Loss Control/Investigation Certificate - 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	Writing and Inquiry	3
FIP	124	Fire Prevention and Public Education	3
FIP	128	Detection and Investigation	3
FIP	152	Fire Protection Law	3
FIP	276	Managing Fire Services	3

Graduation Requirements ..... 15 Credit Hours

Fire Management Certificate - C55240C

-Day and Online

The Fire Service Management Certificate develops the student's team leadership skills in preparation for the effective mitigation of incidents that pose serious loss or hazard to citizens and property. The course work will provide the student with an overview into the theories, practices, and scope of fire service management in action. Course work includes 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	Writing and Inquiry	3
FIP	152	Fire Protection Law	3
FIP	228	Local Government Finance	3
FIP	240	Fire Service Supervision	3
FJP	276	Managing Fire Services	3

Graduation Requirements ..... 15 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 Degree - A25170

-Online

General Education Courses

ECO	251	Principles of Microeconomics	3
ENG	111	Expository Writing	3
ENG	114	Professional Research and Reporting	3
MAT	143	Quantitative Literacy	3
HUM	115	Critical Thinking	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	250	Advanced Global Logistics	4

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
WBL	111	Work-Based Learning I	1
WBL	112	Work-Based learning I	2
WBL	121	Work-Based learning II	1
CTS	130	Spreadsheet	3
LOG	245	Logistics Security	3
MKT	120	Principles of Marketing	3

Graduation Requirements ..... 66 Credit Hours

Global Logistics Technology: Basic Certificate - 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

Graduation Requirements ..... 12 Credit Hours

Distribution Management Certificate - 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	Logistics Systems	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 Degree - A25110

-Day Only

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	3
OR			
ENG	114	Prof Research and Reporting	3
MAT	110	Math Measurement & Literacy	3
HUM	115	Critical Thinking	3
PSY	118	Interpersonal Psychology	3

Major Courses

ACC	175	Hotel and Restaurant Accounting	4
BUS	139	Entrepreneurship I	3
OR			
HRM	210	Meetings & Event Planning	3
WBL	112	Work-Based Learning I	2
CUL	110	Sanitation and Safety	2
CUL	130	Menu Design	2
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 Hosp & Tourism	3
HRM	140	Legal Issues – Hospitality	3
HRM	215	Restaurant Management	3
HRM	220	Cost Control - Food and Beverage	3
HRM	240	Marketing for Hospitality	3
HRM	245	Human Resources Management Hosp	3
HRM	260	Procurement for Hospitality	3
HRM	275	Leadership-Hospitality	3
HRM	280	Management Problems - Hospitality	3
SPA	120	Spanish for the Workplace	3

Major Electives

BUS	230	Small Business Management	3
CUL	130	Menu Design	2
HRM	225	Beverage Management	3
CUL	214	Wine Appreciation	2

HRM	120	Front Office Procedures	3
HRM	215	Restaurant Management	3
BUS	139	Entrepreneurship I	3
HRM	210	Meetings & Event Planning	3
HRM	260	Procurement for Hospitality	3

Graduation Requirements ..... 68 Credit Hours

Hospitality Management Diploma - D25110A

-Day

The hospitality management diploma prepares students to understand and apply the administrative and practical skills needed for positions in the hospitality industry. It also applies advanced classes in the hospitality and business field. Students may also choose concentrations in restaurant or hotel management. Course work includes guest services, human resource management, and other areas critical to the success of hospitality professionals. Upon completion, graduates should qualify for entry level supervisory or management training positions in the hospitality industry.

General Education Courses

ENG	111	Writing and Inquiry	3
MAT	110	Math Measurement & Literacy	3

Major Courses

CUL	110	Sanitation and Safety	2
HRM	110	Hosp & Tourism	3
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

Elective List I (Select one course from the following list):

BUS	139	Entrepreneurship I	3
CUL	214	Wine Appreciation	2
HRM	225	Beverage Management	3

Elective List II (Select a minimum of 8 credit hours from the following list):

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	5
HRM	260	Procurement for Hospitality	3

Elective List III: (Select a minimum of 8 credit hours from the following list):

WBL	112	Work-Based Learning I	2
CUL	214	Wine Appreciation	2
HRM	120	Front Office Procedures	3
HRM	210	Meetings & Event Planning	3
SPA	120	Spanish for the Workplace	3

Graduation Requirements ..... 41 Credit Hours

Hospitality Event Management Certificate - C25110A

-Day Only

The event management certificate prepares students to understand and apply the administrative and practical skills needed for positions in the field of meeting and convention planning. Course work includes guest services, event planning, marketing, and other areas critical to the success of industry professionals. Upon completion, graduates should qualify for entry level supervisory or management training positions in the meeting and convention planning field.

Major Courses

CUL	110	Sanitation and Safety	2
HRM	110	Introduction to Hosp & Tourism	3
HRM	210	Meetings & Event Planner	3

Select a minimum of 7 credit hours from the following:

CUL	130	Menu Design	2
CUL	135	Food & Beverage Service	2
CUL	135A	Food & Beverage Service Lab	1
HRM	140	Legal Issues - Hospitality	3
HRM	220	Cost Control - Food & Beverage	3
HRM	240	Marketing for Hospitality	3
HRM	260	Procurement for Hospitality	3

Completion Requirements ..... 15 Credit Hours

Hospitality Hotel Management Certificate- C25110B

-Day

The hotel management certificate prepares students to understand and apply the administrative and practical skills needed for positions in the hotel industry. Course work includes guest services, sanitation, human resource management, and other areas critical to the success of hotel professionals. Upon completion, graduates should qualify for entry level supervisory or management training positions in the hotel industry.

Major Courses

CUL	110	Sanitation and Safety	2
HRM	110	Introduction to Hospitality & Tourism	3
HRM	120	Front Office Procedures	3
HRM	245	Human Resources Management Hosp	3

Select a minimum of 4 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 ..... 15 Credit Hours

Hospitality Entrepreneur Certificate - C25110C

-Day

The entrepreneur certificate gives students basic business skills specific to the hotel and restaurant industry. Course work includes guest services, human resource management, basic business and entrepreneurship studies, and other areas critical to the success of industry professionals. Upon completion, graduates should have a good understanding of the basics of setting up a business in the hospitality industry.

Major Courses

BUS	139	Entrepreneurship I	3
CUL	110	Sanitation and Safety	2
HRM	110	Introduction to Hospitality & Tourism	3
HRM	245	Human Resources Management Hosp	3

Select a minimum of 4 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 ..... 15 Credit Hours

Hospitality Restaurant Management Certificate - C25110D

-Day

The restaurant management certificate prepares students to understand and apply the administrative and practical skills needed for positions in the restaurant industry. Course work includes guest services, sanitation, human resource management, and other areas critical to the success of restaurant professionals. Upon completion, graduates should qualify for entry level supervisory or management training positions in the restaurant industry.

Major Courses

CUL	110	Sanitation and Safety	2
HRM	110	Introduction to Hospitality & Tourism	3
CUL	135	Food & Beverage Service	2
CUL	135A	Food & Beverage Service Lab	1
HRM	245	Human Resources Management Hosp	3

Select a minimum of 4 credit hours from the following:

CUL	130	Menu Design	2
CUL	214	Wine Appreciation	2
HRM	215	Restaurant Management	3
HRM	225	Beverage Management	3
HRM	260	Procurement for Hospitality	3

Graduation Requirements ..... 15 Credit Hours

LATERAL ENTRY

The Lateral Entry curriculum provides a course of study leading to the development of the general pedagogy knowledge needed to become certified to teach by the North Carolina Department of Public Instruction. Prospective lateral entry candidates are required to meet with the program coordinator prior to entry into the program. They are required to obtain a plan of study from a designated regional alternative licensing center (RALC) prior to applying for admissions to this program.

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 exceptionalities in the classroom. Additional courses may be required based on the review of transcripts completed by the RALC and documented in an individual plan of study.

Upon completion of the program, graduates should meet the general pedagogical 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 Certificate - C55430

-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.

COLLEGE/UNIVERSITY TRANSFER

The course sequence outlined below is suggested for **full-time students** pursuing an **Associate of Arts (AA) Degree or Diploma.** Part-time students should seek advising to determine the best course sequence to meet their educational goals. (Placed out of all developmental courses)

Note: To earn the **AA** degree, all students are required to complete:

- 2 semesters of English Composition;
- 2 semesters of Mathematics;
- 2 semesters of Natural Sciences ;
- 4 semesters of Humanities/Fine Arts, to include one semester of Literature & one semester of Communications ;
- 4 semesters of Behavioral/Social Sciences, to include one semester of History; and
- 20 electives

Click to view a list of General Education Core courses and a list of Transferrable course.

FIRST SEMESTER	Credit Hours	SECOND SEMESTER	Credit Hours
ENG-111	3	ENG 112 or ENG 113	3
MATH	4	MATH	4
NATURAL SCIENCE	4	NATURAL SCIENCE	4
HISTORY Students must choose four courses in Behavioral/Social Sciences. One must be a HISTORY; the four courses must be from three different disciplines	3	BEHAVIORAL/SOC.SCIENCE	3
HUM/FINE ARTS Students must choose four courses in Humanities/Fine Arts. One must be COM 110 or COM 231; one must be Literature; the four courses must be from three different disciplines Students who wish to take Foreign Language should begin the sequence in the first or second semester.	3	HUM/FINE ARTS	3
Total Number of Credit Hours	**17**	**Total Number of Credit Hours**	**17**

- Students may elect to take ACA 122 in any semester.
- Students may also elect to take courses during the summer, pending availability.

THIRD SEMESTER	Credit Hours	FOURTH SEMESTER	Credit Hours
LITERATURE (Fulfills one HUM/FINE ARTS requirement)	3	Select from list of transfer courses	3 (or 4)
BEHAVIORAL/SOC.SCIENCE	3	Select from list of transfer courses	3 (or 4)
BEHAVIORAL/SOC.SCIENCE	3	Select from list of transfer courses	3 (or 4)
HUM/FINE ARTS	3	Select from list of transfer courses	3 (or 4)
APPLY FOR DIPLOMA IN ARTS Minimum 44 credits		Select from list of transfer courses	3 (or 4)
Select from list of transfer courses	3 (or 4)		
Total Number of Credit Hours	**15**	**Total Number of Credit Hours**	**15**
		APPLY FOR ASSOCIATE IN ARTS DEGREE	**64**

THIS SHEET IS FOR ADVISING PURPOSES ONLY. Students should work with their Advisor to determine course selections that will result in the greatest transferrable credit, for the intended program, upon transfer to the four-year school.

Note 4-semester outline based upon no pre-requisites classes required.

COLLEGE/UNIVERSITY TRANSFER

The course sequence outlined below is suggested for **full-time students** pursuing an **Associate of Fine Arts (AFA) Degree – Art pre-major.** Part-time students should seek advising to determine the best course sequence to meet their educational goals. (Placed out of all developmental courses)

Note: To earn the **AFA** degree, all students are required to complete:

- 2 semesters of English Composition;
- 1 semester of Mathematics;
- 1 semester of Natural Sciences;
- 2 semesters of Humanities/Fine Arts, to include one semester of Literature & one semester of Communication;
- 3 semesters of Behavioral/Social Sciences, to include one semester of History;
- 15 credits of major core ART courses; and
- 21 credits of ART electives

Click to view a list of General Education Core courses for the AFA degree and a list of Transferrable courses for the AFA degree.

FIRST SEMESTER	Credit Hours	SECOND SEMESTER	Credit Hours
ENG-111	3	ENG-112 or ENG-113	3
ART-114	3	ART-115	3
ART-121	3	ART-122	3
ART-131	3	MATHEMATICS	3
HISTORY Students must choose 3 courses in Behavioral/Social Sciences. One must be a HISTORY; the 3 courses must be from 3 different disciplines	3	Social/Behavioral Science	3
		COM 110 or COM 231 (Fulfills one HUM/FINE ARTS requirement)	3
Total Number of Credit Hours	**15**	**Total Number of Credit Hours**	**18**

- Students may also elect to take courses during the summer, pending availability.

THIRD SEMESTER	Credit Hours	FOURTH SEMESTER	Credit Hours
LITERATURE (Fulfills one HUM/FINE ARTS requirement)	3	ART (degree elective)	3
Social/Behavioral Science	3	ART (degree elective)	3
ART (degree elective)	3	ART (degree elective)	3
ART (degree elective)	3	ART (degree elective)	3
ART (degree elective)	3	NATURAL SCIENCE	4
Total Number of Credit Hours	**15**	**Total Number of Credit Hours**	**16**
		APPLY FOR ASSOCIATE IN FINE ARTS DEGREE	**64**

THIS SHEET IS FOR ADVISING PURPOSES ONLY. Students should work with their Advisor to determine course selections that will result in the greatest transferrable credit, for the intended program, upon transfer to the four-year school.

Note 4-semester outline based upon no pre-requisite classes required.

COLLEGE/UNIVERSITY TRANSFER

The course sequence outlined below is suggested for **full-time students** pursuing an **Associate of Fine Arts (AFA) Degree – Music and Music Education pre-major.** Part-time students should seek advising to determine the best course sequence to meet their educational goals. (Placed out of all developmental courses)

Note: To earn the **AFA** degree, all students are required to complete:

- 2 semesters of English Composition;
- 1 semester of Mathematics;
- 1 semester of Natural Sciences;
- 2 semesters of Humanities/Fine Arts, to include one semester of Literature & one semester of Communication;
- 3 semesters of Behavioral/Social Sciences, to include one semester of History;
- 4 semesters of Music Theory courses;
- 4 semesters of Applied Music courses;
- 4 semesters of Ensemble;
- 3 credits of Music Business
- 2 credits of Class Piano; and
- 3 elective Music credits

Click to view a list of General Education Core courses for the AFA degree and a list of Transferrable courses for the AFA degree.

FIRST SEMESTER	Credit Hours	SECOND SEMESTER	Credit Hours
ENG-111	3	ENG-112 or ENG-113	3
*MUS-121	4	MUS-122	4
**MUS-161	2	MUS-162	2
MUS-131, 133, or 141	1	MUS-152P	1
MUS-151P	1	MUS-132, 134, or 142	1
		MUS elective	3
MATHEMATICS	3	Social/Behavioral Science	3
Total Number of Credit Hours	**14**	**Total Number of Credit Hours**	**17**

- Students may also elect to take courses during the summer, pending availability.

THIRD SEMESTER	Credit Hours	FOURTH SEMESTER	Credit Hours
LITERATURE (Fulfills one HUM/FINE ARTS requirement)	3	MUS-222	4
HISTORY Students must choose 3 courses in Behavioral/Social Sciences. One must be a HISTORY; the 3 courses must be from 3 different disciplines	3	MUS-262	2
		MUS-232, 234, or 242	1
NATURAL SCIENCE	4	MUS 170	3
MUS-221	4	COM 110 or COM 231 (Fulfills one HUM/FINE ARTS requirement)	3
MUS-261	2	Social/Behavioral Science	3
MUS-231, 233, or 241	1		
Total Number of Credit Hours	**17**	**Total Number of Credit Hours**	**16**
		APPLY FOR ASSOCIATE IN FINE ARTS DEGREE	**64**

THIS SHEET IS FOR ADVISING PURPOSES ONLY. Students should work with their Advisor to determine course selections that will result in the greatest transferrable credit, for the intended program, upon transfer to the four-year school.

Note: 4-semester outline based upon no pre-requisite classes required.
*MUS-111 prerequisite or placement
** Audition and interview required for all applied lessons (see website and Program Coordinator for details)

COLLEGE/UNIVERSITY TRANSFER

The course sequence outlined below is suggested for **full-time students** pursuing an **Associate of Sciences (AS) Degree or Diploma.** Part-time students should seek advising to determine the best course sequence to meet their educational goals. (Placed out of all developmental courses)

Note: To earn the **AS** degree, all students are required to complete:

- 2 semesters of English Composition;
- 2 semesters of Mathematics;
- 2 semesters of Natural Sciences as a one year sequence in one discipline area;
- 3 semesters of Humanities/Fine Arts, to include one semester of Literature & one semester of Communications;
- 3 semesters of Behavioral/Social Sciences, to include one semester of History;
- 2 additional semesters of Mathematics or Natural Sciences; and
- 20 electives to include at least 14 credits of Mathematics, Natural Sciences, or Computer Sciences.

Click to view a list of General Education Core courses and a list of Transferrable course.

FIRST SEMESTER	Credit Hours	SECOND SEMESTER	Credit Hours
ENG-111	3	ENG 112 or ENG 113 or 114	3
MATH	4	MATH	4
BEHAVIORAL/SOC.SCIENCE	3	NATURAL SCIENCE	4
HISTORY Students must choose three courses in Behavioral/Social Sciences. One must be a HISTORY; the three courses must be from three different disciplines	3	BEHAVIORAL/SOC.SCIENCE	3
HUM/FINE ARTS Students must choose three courses in Humanities/Fine Arts. One must be Literature; the three courses must be from three different disciplines. Students who wish to take Foreign Language should begin the sequence in the first or second semester.	3	HUM/FINE ARTS	3
Total Number of Credit Hours	**16**	**Total Number of Credit Hours**	**17**

Students may elect to take ACA 122 in any semester.
Students may also elect to take courses during the summer, pending availability.

THIRD SEMESTER	Credit Hours	FOURTH SEMESTER	Credit Hours
LITERATURE (Fulfills one HUM/FINE ARTS requirement)	3	Select from Mathematics/ Natural Sciences Computer Sciences	3 (or 4)
NATURAL SCIENCE	4	Select from Mathematics/ Natural Sciences Computer Sciences	3 (or 4)
Select from Mathematics/ Natural Sciences General Education Core	4	Select from list of transferrable courses	3 (or 4)
Select from Mathematics/ Natural Sciences General Education Core	4	Select from list of transferrable courses	3 (or 4)
APPLY FOR DIPLOMA IN SCIENCES…Minimum 44 credits		Select from list of transferrable courses	3 (or 4)
Select from Mathematics/ Natural Sciences Computer Sciences	3 (or 4)		
Total Number of Credit Hours	**18 (or 19)**	**Total Number of Credit Hours**	**15**
		APPLY FOR ASSOCIATE IN SCIENCE DEGREE	**64**

THIS SHEET IS FOR ADVISING PURPOSES ONLY. Students should work with their Advisor to determine course selections that will result in the greatest transferrable credit, for the intended program, upon transfer to the four-year school.

Note 4-semester outline based upon no pre-requisites classes required.

COLLEGE/ UNIVERSITY TRANSFER

ASSOCIATE IN SCIENCE PRE-MAJOR: ENGINEERING (A.S.)

Dean Cheryl Keeton
Phone: 866-5611
Email: clkeeton@waketech.edu

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 TECHNOLOGIES

Computer Technologies (CT) Division

Dean Angela Bequette
Phone: 919-866-5394
Email: albequette@waketech.edu

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.

1. Click on the "**Program Name**" to go to the program's web page
2. Click on the "**Program of Study**" to see specific course requirements for that program

Programs may be offered during the day, evening, online, or a combination. Students should refer to WebAdvisor for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully online.

Program Name	Program Code
Advertising and Graphic Design – *AAS Degree*	A30100
Graphics Design **– *Certificate***	C30100A
Web and Graphic Design **– *Certificate***	C30100B
Advanced Graphic Design - ***Certificate***	C30100D
Design Basics- ***Certificate***	C30100E
Design Portfolio- ***Certificate***	C30100F
Computer Information Technology – *AAS Degree*	A25260
Hardware Troubleshooting (A+) **- *Certificate***	C25260G
IT Foundations **- *Certificate***	C25260M
IT Support Management **- *Certificate***	C25260L
IT Support Technician **- *Certificate***	C25260K
Open Source IT **- *Certificate***	C25260O
Computer Programming – *AAS Degree*	A25130
C++ Programming **– *Certificate***	C25130C
JAVA Programming **– *Certificate***	C25130A
Visual BASIC Programming **– *Certificate***	C25130B
Visual C# Programming **- *Certificate***	C25130D
Advanced Computer Programming **- *Certificate***	C25130G
Fundamentals of Computer Programming **- *Certificate***	C25130H
Computer Technology Integration	
Data Storage & Virtualization **– *AAS Degree***	A25500D
Healthcare Business Informatics **– *AAS Degree***	A25500H
Database Management Administrator– *AAS Degree*	A25150A
Database Management Developer – *AAS Degree*	A25150B
Oracle Developer Certificate – ***Certificate***	C25150A
Oracle DBA Programming Certificate – ***Certificate***	C25150B
Database Developer-Microsoft **- *Certificate***	C25150D
Information Systems Security – *AAS Degree*	A25270
High Technology Criminal Investigations **- *Diploma***	D25270H
Cisco Security **– *Certificate***	C25270C
Systems Security Practitioner **- *Certificate***	C25270I
Red Hat Security **– *Certificate***	C25270R
Medical Office Administration– *AAS Degree*	A25310
Medial Office Administration **– *Diploma***	D25310
Medical Office Specialist - ***Certificate***	C25310A
Medical Document Specialist **- *Certificate***	C25310C
Networking Technology – *AAS Degree*	A25340
Cisco Certified Network Associate (CCNA) **- *Certificate***	C25340C
Cisco Certified Network Professional (CCNP) **– *Certificate***	C25340I
Microsoft Certified Systems Administrator (MCSA) **- *Certificate***	C25340J
Linux/Red Hat Administration **- *Certificate***	C25340K

COMPUTER TECHNOLOGIES

Office Administration – ***AAS Degree***	A25370
Office Administration - ***Diploma***	D25370
Office Specialist - ***Certificate***	C25370A
Office Documents – ***Certificate***	C25370B
Microsoft Office Specialist - ***Certificate***	C25370C
Office Administration/Legal - ***Certificate***	C2537AA
Simulation and Game Development	
Simulation and Game Development-Art & Modeling – ***AAS Degree***	A25450A
Modeling and Animation – ***Diploma***	D25450B
Modeling and Animation – ***Certificate***	C25450A
Production - ***Certificate***	C25450B
Mobile Game Development– ***Certificate***	C25450C
Fundamentals I for Simulation and Game Development– ***Certificate***	C25450D
Fundamentals II for Simulation and Game Development– ***Certificate***	C25450E
Quality Assurance for Simulation and Game Development– ***Certificate***	C25450F
Business for Simulation and Game Development– ***Certificate***	C25450G
Programming for Simulation and Game Development– ***Certificate***	C25450H
Production - ***Certificate***	C25450I
Web Technologies	
Web Technologies-Web Developer – ***AAS Degree***	A25290A
Web Technologies- Web Designer – ***AAS Degree***	A25290B
Mobile Content Development - ***Diploma***	D25290
Android Application Developer - ***Certificate***	C25290E
Advanced WEB Developer – ***Certificate***	C25290F
iOS Application Developer - ***Certificate***	C25290D
Web Designer - ***Certificate***	C25290C
Web Developer - ***Certificate***	C25290A

Collaborative Agreements

None at this time

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 Degree - A30100

- Day, Evening & Online

Major Courses

ENG	111	Writing and Inquiry	3
GRD	110	Typography I	3
GRD	121	Drawing Fundamentals I	2
GRD	141	Graphic Design I	4
GRD	142	Graphic Design II	4
GRD	145	Design Applications I	1
GRD	146	Design Applications II	1
GRD	151	Computer Design Basics	3
GRD	152	Computer Design Technology I	3
GRD	167	Photographic Imaging I	3
GRD	230	Technical Illustration	2
GRD	241	Graphic Design III	4
GRD	263	Illustrative Imaging	3
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	214	Social Media	3
___	___	ART 111 or HUM 230	3
___	___	MAT 121 or MAT 110 or MAT 143	3
___	___	COM 120 ort COM 231	3
___	___	WBL 111 or GRD 246 or WBL 112	1
___	___	ECO 252 or PSY 150	3

Graduation Requirements.....71 Credit Hours

Advertising and Graphic Design: Graphics Design Certificate 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 I	4
GRD	151	Computer Design Basics	3
GRD	152	Computer Design Technology I	3
GRD	263	Illustrative Imaging	3

Completion Requirements.....16 Credit Hours

Advertising and Graphic Design: Web and Graphic Design Certificate - 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	140	Web Development Tools	3
WEB	210	Web Design	3

Completion Requirements.....18 Credit Hours

Advertising and Graphic Design: Advanced Graphic Design Certificate - C30100D

-Online

Certificate in graphic design, advertising, and social media concepts.

GRD	142	Graphic Design II	4
GRD	167	Photographic Imaging I	3
GRD	214	Social Media	3
GRD	241	Graphic Design III	4
GRD	282	Advertising Copywriting	2

Completion Requirements.....16 Credit Hours

Advertising and Graphic Design: Design Basis Certificate - C30100E

-Online

Basics of the principles of design and their applications.

GRD	121	Drawing Fundamentals I	2
GRD	141	Graphic Design I	4
GRD	142	Graphic Design II	4
GRD	145	Design Applications I	1
GRD	151	Computer Design Basics	3

Completion Requirements ..... 14 Credit Hours

Advertising and Graphic Design: Design Portfolio Certificate - C30100F

-Day

Certificate leads to creation of an online and physical graphic design portfolio.

WEB	140	Web Development Tools	3
GRD	265	Digital Print Production	3
GRD	280	Portfolio Design	4
GRD	285	Client/Media Relations	2

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 Degree - A25260, - Day and Evening

General Education Courses

ENG	111	Writing and Inquiry	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	121	Algebra/Trigonometry I	3
MAT	171	Precalculus Algebra	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	Writing/Research in the Discipline	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	Networking Concepts	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

WBL	113	Work-Based Learning I*	3
CTI	140	Virtualization Concepts	3
CTI	240	Virtualization Admin I	3
CTS	210	Computer Ethics	3
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
OST	137	Office Software Applications	3

Major Electives List 2

Select 3 hours from the following courses

WBL	122	Work-Based Learning II*	2
CSC	139	Visual BASIC Programming	3
CTI	141	Cloud & Storage Concepts	3
CTI	241	Virtualization Admin II	3
CTS	293	Selected Topics Tech Support Manager	2
DBA	115	Database Applications	3
NOS	220	Linux/UNIX Administration I	3
NET	126	Routing Basics	3
COE	122	Co-op Work Experience I	2
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

*****Work based education is an elective. Students must have approval from the Program Director and pre-register with the Work-based Learning Office. The work may be done over one semester s WBL 113, two semesters as WBL 112 and WBL 121, or three semesters as WBL 111, WBL 121 and WBL 131.

Hardware Troubleshooting Certificate - 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

IT Foundations Certificate - C25260M

-Day, Evening, and Online

CIS	110	Introduction to Computers	3
CIS	115	Intro to Programming & Logic	3
DBA	110	Database 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
NET	110	Networking Concepts	3

Completion Requirements .....18 Credit Hours

IT Support Management Certificate - C25260L

– Day, Evening, and Online

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	285	Systems Analysis and Design	3
CTS	293	Selected Topics in CIT: Tech Support Mgr	2

Completion Requirements .....13 Credit Hours

IT Support Technician Certificate - 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
CTS	272	Desktop Support Apps	3
NOS	130	Windows Single User	3
NOS	230	Windows Admin I	3

Completion Requirements..... 15 Credit Hours

Open Source IT Certificate - C25260O

-Day, Evening, and Online

CIS	110	Introduction to Computers	3
CTS	135	Integrated Software Introduction	4
NOS	110	Operating Systems Concepts	3
NOS	120	Linux/UNIX Single User	3
NOS	220	Linux/UNIX Administration I	3

Completion Requirements..... 16 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 Degree - A25130

-Day and Evening

Major Courses

ACA	111	College Student Success	1
ENG	111	Writing and Inquiry	3
CIS	115	Introduction to Programming and Logic	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	Networking Concepts	3
NOS	110	Operating System Concepts	3
NOS	120	Linux/UNIX Single User	3
SEC	110	Security Concepts	3
		CIS 110 or CIS 111	3
		CSC 249 or Work-Based Learning I*	2
		ENG 114 or COM 120	3
		HUM 110 or HUM 115	3
		MAT 121 or Higher	3

		PSY 150 or SOC 210	3
		Introductory Programming (2 courses)	6
		Advanced Programming (2 courses)	6
		Major Elective I	3
		Major Elective II	3
		Major Elective III	3

*Work-Based Learning is an elective. Students must have approval from the department head and pre-register with the Computer Technologies Division office. As an alternative to CSC 249, two credit hours of Work-Based Learning can be taken. The Work-Based Learning work period may be taken over two semester as WBL 112 or over two semesters as WBL-111, and WBL-121.

Introductory Programming I and II
(Select 2 Courses)

CSC	133	C Programming	3
CSC	134	C++ Programming	3
CSC	135	COBOL Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	JAVA Programming	3
CSC	153	C# Programming	3

Advanced Programming I and II
(Select 2 Courses)

CSC	233	Adv C Programming	3
CSC	234	Adv C++ Programming	3
CSC	235	Adv COBOL Programming	3
CSC	239	Adv Visual BASIC Programming	3
CSC	251	Adv JAVA Programming	3
CSC	253	Adv C# Programming	3

Major Electives I
Select 3 hours from the following courses

CSC	152	SAS	4
DBA	115	Database Applications	3
DBA	120	Database Programming I	3
SGD	115	Physically-Based Modeling	3
SGD	168	Mobile SG Programming I	3
WEB	110	Internet / Web Fundamentals	3
WEB	115	Web Markup and Scripting	3

Major Electives II
Select 3 hours from the following courses

CSC	258	JAVA Enterprise Programs	3
DBA	220	Oracle DB Programming II	3
DBA	221	SQL Server DB Programming II	3
DBA	223	MySQL DB Programming II	3
SGD	268	Mobile SG Programming II	3
WEB	140	Web Development Tools	3
WEB	151	Mobile Application Dev I	3
WEB	179	JAVA Web Programming	3

Major Electives III
Select 3 hours from the following courses

CSC	278	JAVA Message Service	3
DBA	260	Oracle DBMS Administration	3
DBA	261	SQL Server DBMS Administration	3
SGD	125	SG Artificial Intellig	3
SGD	271	Adv Flash Programming	3
WEB	180	Active Server Pages	3
WEB	182	PHP Programming	3
WEB	185	ColdFusion Programming	3
WEB	251	Mobile Application Dev II	3

Graduation Requirements ..... 68 Credit Hours

JAVA Programming Certificate - C25130A

-Day and Online

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.

CSC	151	JAVA Programming	3
CSC	251	Advanced JAVA Programming	3
CSC	258	JAVA Enterprise Programs	3
DBA	120	Database Programming I	3
WEB	151	Mobile Application Dev I	3

Completion Requirements ..... 15 Credit Hours

Visual Basic Programming Certificate - C25130B

-Online

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
DBA	110	Database Concepts	3
DBA	115	Database Applications	3
WEB	180	Active Server Pages	3

Completion Requirements ..... 15 Credit Hours

C++ Programming Certificate - C25130C

-Day

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	234	Advanced C++	3
CSC	249	Data Structure & Algorithms	3
DBA	120	Database Programming I	3

Completion Requirements ..... 13 Credit Hours

C# Programming Certificate - C25130D

–Online

Designed for individuals interested in acquiring the advanced programming skills necessary to design and implement C# programs. The student will learn how to design C# 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	153	C# Programming	3

CSC	253	Adv C# Programming	3
DBA	110	Database Concepts	3
DBA	115	Database Applications	3
WEB	180	Active Server Pages	3

Completion Requirements .....15 Credit Hours

Advanced Computer Programming - C25130G, -Day

The Advanced Computer Programming Certificate will give students the opportunity to achieve a broad and advance background in computer programming by offering advance courses in the languages outlined for Fundamentals of computer Programming Certificate

__	__	DBA 120 or NOS 130	3
CSC	249	Data Structure & Algorithms	3
__	__	Advanced Programming Elective	3
__	__	Advanced Elective	3

Advanced Programming Elective
(Select 3.0 hours from the following courses)

CSC	233	Advanced C Programming	3
CSC	234	Advanced C++ Programming	3
CSC	235	Advanced COBOL Programming	3
CSC	239	Advanced Visual BASIC Programming	3
CSC	251	Advanced Java Programming	3
CSC	253	Advance C# Programming	3

Advanced Elective
(Select 3.0 hours from the following courses)

CSC	258	JAVA Enterprise Programs	3
DBA	220	Oracle DB Programming II	3
DBA	221	SQL Server DB Programming II	3
DBA	223	MySQL DB Programming II	3
SGD	271	Adv Flash Programming	3
SGD	268	Mobile SG Programming II	3
WEB	179	Java Web Programming	3
WEB	251	Mobile Application Dev II	3

Completion Requirements .....12 Credit Hours

Fundamentals of Computer Programming - C25130H

-Day

The Fundamentals of Computer Programming Certificate will give students the opportunity to achieve a broad background in computer programming by offering an introductory course in database and two programming languages such as C++, Visual Basic, Java, COBOL and C#.

CIS	115	Intro to Prog & Logic	3
DBA	110	Database Concepts	3
__	__	Introductory Programming	3
__	__	Elective	3

Introductory Programming
(Select 3.0 hours from the following courses)

CSC	133	C Programming	3
CSC	134	C++ Programming	3
CSC	135	COBOL Programming	3
CSC	139	Visual BASIC Programming	3
CSC	151	Java Programming	3
CSC	153	C# Programming	3

Electives
(Select 3.0 hours from the following courses)

CSC	152	SAS	3
DBA	115	Database Application	3
DBA	120	Database Programming I	3
SGD	115	Physically-Based Modeling	3
SGD	168	Mobile SG Programming I	3
SGD	171	Flash SG Programming	3
WEB	110	Internet/Web Fundamentals	3
WEB	115	Web Markup and Scripting	3
WEB	151	Mobile Application Dev I	3

Completion Requirements..... 12 Credit Hours

COMPUTER TECHNOLOGY INTEGRATION

Data Storage and Virtualization Degree

This unique degree program provides skills and credentials that can qualify graduates for a variety of positions – in organizations all over the world. Any organization that uses operating system virtualization, cloud computing, or data storage solutions will need people trained in CTI-DSV.

The program includes courses in Cisco routing and switching, Microsoft desktop and server operating systems, in-depth training with O/S virtualization, and unique courses in datacenter storage hardware environments. Instruction in these areas can qualify students to take industry certification exams in VMWare, Cisco, Microsoft, CompTIA, and NetApp.

This program also includes a co-op component, putting students to work with local employers for on-the-job training in “live” datacenters.

Data Storage and Virtualization Degree (A25500D) – Day and Evening

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	114	Professional Research & Reporting	3
MAT	121	Algebra/Trigonometryl	3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)

ART	111	Art Appreciation	3
DRA	111	Theatre Appreciation	3
HUM	115	Critical Thinking	3
MUS	110	Music Appreciation	3
PHI	240	Introduction to Ethics	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

ECO	151	Survey of Economics	3
ECO	251	Principles Of Microeconomics	3
HIS	111	World Civilizations 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 Courses

CET	242	High Perf Computing (Datacenter Troubleshooting)	3
CTI	110	Web, Pgm & DB Foundation	3
CTI	120	Network & Sec Foundation	3
CTI	130	OS and Device Foundation	6
CTI	140	Virtualization Concepts	3
CTI	141	Cloud & Storage Concepts	3
CTI	193	Troubleshooting Methodologies	3
CTI	240	Virtualization Admin I	3
CTI	241	Virtualization Admin II	3
CTS	115	Info Sys Business Concept	3
CTS	118	IS Professional Comm	2
HPC	140	Intro to HPC Architecture (Datacenter Design & PR)	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NOS	130	Windows Single User	3
NOS	230	Windows Admin I	3
OMT	154	Customer Satisfaction	2
WBL	112	Work-Based Learning I	2
WBL	122	Work-Based Learning II	2
WBL	132	Work0-Based Learning III	2

Graduation Requirements ..... 73 Credit Hours

Healthcare Business Informatics Degree

The CTI-HBI degree program is intended for computer system professionals who expect to work for a healthcare provider of any size; from large scale hospital systems to small practice offices.

A concentration in healthcare terminology and medico-legal issues is combined with specific courses in healthcare networking and database design. Any healthcare provider that uses computers to store and manage their patient information needs an IT professional that understands the confidentiality and business process concerns of the industry – this degree program is intended to produce those IT professionals.

Potential employers for graduates of this program would include the IT departments at Rex, Wake Med and Duke hospitals, and any healthcare related industry partner, such as Blue Cross Blue Shield and other health insurance providers.

Healthcare Business Informatics Degree (A25500H) - Day and Evening

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	114	Professional Research & Reporting	3
MAT	121	Algebra/Trigonometry I	3

Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)

ART	111	Art Appreciation	3
DRA	111	Theatre Appreciation	3
HUM	115	Critical Thinking	3
MUS	110	Music Appreciation	3
PHI	240	Introduction to Ethics	3

Social/Behavioral Science Elective
(Select 3.0 hours from the following courses)

ECO	151	Survey of Economics	3
ECO	251	Principles Of Microeconomics	3
HIS	111	World Civilizations 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 Courses

ACA	220	Professional Transition	1
CTI	110	Web, Pgm, & Db Foundation	3
CTI	120	Network & Sec Foundation	3
CTI	130	OS and Device Foundation	6
CTS	115	Info Sys Business Concept	3
CTS	118	IS Professional Comm	2
CTS	135	Integrated Software Intro	4
DBA	110	Database Concepts	3
OST	141	Med Terms I	3
OST	142	Med Terms II	3
OST	149	Medical Legal Issues	3
HBI	110	Issues and Trends in HBI	3
HBI	113	Survey of Medical Insurance	3
HBI	210	Intro to Health Info Net	3
HBI	250	Data Management and Utilization	3
NET	110	Networking Concepts	3

Graduation Requirements ..... 64 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-Administrator Degree- A25150A – Online

Major Courses

___	___	CIS 110 or CIS 111	2
CIS	115	Introduction to Programming and Logic	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	260	Oracle DBMS Admin	3
DBA	289	Database Project	3
ENG	111	Writing and Inquiry	3
NET	110	Networking Concepts	3
NOS	110	Operating System Concepts	3
NOS	120	Linus/UNIX Single User	3
NOS	130	Windows Single User	3
NOS	220	Linux/UNIX Admin I	3
SEC	110	Security Concepts	3
___	___	COM 120 or COM 231	3
___	___	HUM 110 or HUM 115	3
___	___	MAT 110 or Higher	3
___	___	WBL 111 or DBA 191	1
___	___	ECO 151 or HIS 111	3
___	___	WBL 121 or DBA 291	1

Graduation Requirements..... 70 Credit Hours

Database Management - Developer Degree- A25150B - Day

General Education Courses

Major Courses

CIS	115	Introduction to Programming and Logic	3
CSC	153	C# Programming	3
CSC	253	Advanced C# Programming	3
CTS	115	Information Systems Business Concept	3
CTS	285	Systems Analysis and Design	3
ENG	111	Writing and Inquiry	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
___	___	CIS 110 or CIS 111	2
___	___	MAT 110 or Higher	3
___	___	WEB 180 or WEB 185	3
___	___	COM 120 or COM 231	3
___	___	DBA 220 or DBA 221	3
___	___	WBL 111 or DBA 191	1
___	___	ECO 151 or HIS 111	3
___	___	HUM 110 or HUM 115	3
___	___	WBL 121 or DBA 291	1

Graduation Requirements..... 70 Credit Hours

Database Management - Developer Degree- A25150B - Evening

Major Courses

CIS	115	Intro to Prog & Logic	3
DBA	110	Database Concepts	3
CSC	153	C# Programming	3
SEC	110	Security Concepts	3
DBA	120	Database Programming I	3
DBA	115	Database Applications	3
DBA	210	Database Administration	3
CSC	253	Advanced C# Programming	3
DBA	240	Database Analysis/Design	3
NET	110	Networking Concepts	3
WEB	185	ColdFusion Programming	3
CTS	115	Info Sys Business Concept	3
DBA	230	Database in Corp Environs	3
ENG	111	Writing and Inquiry	3
NOS	110	Operating System Concepts	3
CTS	285	System Analysis & Design	3
DBA	289	Database Project	3
___	___	CIS 110 or CIS 111	2
___	___	MAT 110 or Higher	3
___	___	WBL 111 or DBA 191	1
___	___	DBA 220 or DBA 221	3
___	___	HUM 110 or HUM 115	3
___	___	WBL 121 or DBA 291	1
___	___	COM 120 or COM 231	3
___	___	ECO 151 or HIS 111	3

Graduation Requirements..... 70 Credit Hours

Oracle Developer Certificate - 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	230	Database in Corp Environs	3
DBA	240	Database Analysis/Design	3
DBA	260	Oracle DBMS Admin	3
DBA	270	Oracle Performance Tuning	3

Completion Requirements..... 15 Credit Hours

Oracle DBA Programming Certificate- C25150B

-Day

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	240	Database Analysis/Design	3
CSC	153	C# Programming	3
DBA	220	Oracle DB Programming II	3
WEB	185	ColdFusion Programming	3
DBA	191	Selected Topics	1
DBA	291	Selected Topics	1

Completion Requirements..... 17 Credit Hours

Database Developer-Microsoft - C25150D

Major Courses

CSC	153	C# Programming	3
DBA	112*	Database Concepts	3
DBA	120**	Database Programming I	3
DBA	221	SQL Server DB Prog II	3
WEB	180	Active Server Pages	3

Graduation Requirement..... 15 Credit Hours

* Can substitute DBA-110
** Can substitute CSC-253 or DBA-115

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 Degree - A25270 (Day and Evening)

General Education Courses

ENG	111	Writing and Inquiry	3
MAT	121	Algebra/Trigonometry I	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	111	Art Appreciation	3
DRA	111	Theatre Appreciation	3
HUM	115	Critical Thinking	3
MUS	110	Music Appreciation	3
PHI	240	Introduction to Ethics	3

Communication Elective
(Select 3.0 hours from the following courses)

ENG	112	Writing/Research in the Discipline	
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
HIS	111	World Civilizations 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 Courses

CIS	110	Introduction to Computers	3
CIS	115	Introduction to Programming and Logic	3
CJC	111	Intro to Criminal Justice	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
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 (Select one Option grouping below)

Option 1-Cisco Certified Network Assoc Security Track

NET	225	Routing & Switchinig I	3
NET	226	Routing & Switching II	3
NET	270	Building Scalable Network	3
SEC	193	Secure Routing/Firewalls	3

Option 2-Global Certified Windows Security Admin (GCWN) Track

NOS	230	Windows Admin I	3
NOS	231	Windows Admin II	3
NOS	232	Windows Admin III	3
NOS	233	Windows Admin IV	**3**

Option 3-Radhat Certified Security Specialist Track

NOS	220	Linux/UNIX Admin I	3
NOS	221	Linux/UNIX Admin II	3
NOS	222	Linux/UNIX Admin III	3
NOS	230	Windows Admin I	3

Option 4-High Technology Criminal Investigations Diploma Track

CCT	121	Computer crimes Investigation	4
CCT	240	Data Recovery Techniques	3
CTS	120	Hardware/Software Support	3
CTS	220	Advanced Hardware/Software Support	3

Graduation Requirements ..... 75 Credit Hours

High Technology Criminal Investigations (D25270H) Diploma (Day)

Communication Elective 3
(Select 3.0 hours from the following courses)

ENG	112	Writing/Research in the Discipline	
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 Courses

CCT	121	Computer Crime Investigations	4
CCT	240	Data Recovery Techniques	3
CJC	111	Intro to Criminal Justice	3
CTS	115	Info Sys Business Concept	3
CTS	120	Hardware/Software Support	3
CTS	220	Advanced Hardware/Software Support	3
ENG	111	Writing and Inquiry	3
NOS	110	Operating System Concepts	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NOS	120	Linux/UNIX Single User	3
SEC	110	Security Concepts	3
SEC	150	Secure Communications	3
SEC	160	Security Administration I	3
___	___	Communications Elective (min 3 cr hrs)	3

Graduation Requirements ..... 46 Credit Hours

Cisco Security Certificate - C25270C

– Day, Evening, and Online

NET	225	Routing & Switching I	3
NET	226	Routing & Switching II	3
NET	270	Building Scalable Network	3
SEC	150	Secure Communications	3
SEC	193	Secure Routing/Firewalls	3

Completion Requirements ..... 15 Credit Hours

Systems Security Practitioner (C25270I) Certificate (Day, evening, online)

Major Courses

NET	125	Networking Basics	3
NET	126	Routing Basics	3
SEC	160	Security Administration I	3
SEC	210	Intrusion Detection	3
SEC	220	Defense-in-Depth	3
SEC	289	Security Capstone Project	3

Completion Requirements ..... 18 Credit Hours

Red Hat Security Certificate - C25270R

– Day, Evening, and Online

SEC	150	Secure Communications	3
NOS	220	Linux/UNIX Admin I	3
NOS	221	Linux/UNIX Admin II	3
NOS	222	Linux/UNIX Admin III	3
NOS	230	Windows Admin I	3

Completion Requirements ..... 15 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 services representative, and medical transcriptionist.

Coursework includes processing and maintaining medical records, utilizing office equipment and 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 Degree - A25310

-Online

General Education Courses

ENG	111	Writing and Inquiry	3

Humanities and Fine Arts Elective

(Choose 3 credit hours from the following courses)

ART	111	Art Appreciation	3
MUS	110	Music Appreciation	3
HUM	115	Critical Thinking	3

Mathematics Electives

(Choose 3 credit hours from the following courses)

MAT	110	Mathemetical Measurement	4
BIO	110	Principles of Biology	4

Communications Electives

(Choose 3 credit hours from the following courses)

ENG	114	Professional Research and Reporting	3
ENG	112	Writing/Research in the Disc	3
COM	120	Intro Interpersonal Comm	3

Social and Behavioral Sciences Electives

(Choose 3 credit hours from the following courses)

PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
ECO	251	Prin of Microeconomics	3
HIS	111	World Civilizations I	3

Major Courses

ACA	220	Professional Transition	1
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	184	Records Management	3
OST	188	Issues in Office Technology	2
OST	243	Medical Office Simulation	3
OST	244	Medical Document Production	2
OST	281	Emerg Issues in Medical Office	3

OST Electives

(Choose 5 credit hours from the following courses)

CIS	111	Basic PC Literacy	2
CTS	130	Spreadsheet	3
CTS	230	Advanced Spreadsheet	3
OST	132	Keyboard Speed Building	2
OST	135	Adv. Text Entry and Formatting	4
OST	138	Advanced Software Applications	3
OST	153	Office Finance Solutions	2
OST	181	Introduction to Office Systems	3
OST	233	Desktop Publishing	3
OST	236	Adv. Word/Information Processing	3
OST	241	Medical Transcription I	2
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2
OST	284	Emerging Technologies	2
WBL	111	Work-Based Learning I	1
WBL	121	Work-Based Learning II	1
WBL	112	Work-Based Learning I	1

Graduation Requirements ..... 67 Credit Hours

Medical Office Administration Diploma - D25310

-Online

The Medical Office Administration diploma program 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 and ethics, billing and coding, and office procedures. Employment opportunities include healthcare facilities, insurance billing offices, labs, and manufacturers of medical equipment.

Communications Electives

(Choose 3 credit hours from the following courses):

ENG	112	Argument-Based Research	3
ENG	114	Professional Research and Reporting	3
COM	120	Intro Interpersonal Comm	3

Major Courses

ENG	111	Writing and Inquiry	3
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	243	Medical Office Simulation	3
OST	247	Procedure Coding	2
OST	248	Diagnostic Coding	2
OST	281	Emerging Issues in Medical Office	3

Graduation Requirements ..... 41 Credit Hours

Medical Office Specialist Certificate - 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 Certificate - 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	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
OR			
OST	244	Medical Document Production	2

Completion Requirements ..... 14 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 Degree - A25340

- Day and Evening

General Education Courses

ENG	111	Writing & Inquiry	3
___	___	Communication Elective	3
___	___	Humanities/Fine Arts Elective	3
MAT	121	Algebra/Trigonometry I	3
___	___	Social/Behavioral Science Elective	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

ART	111	Art Appreciation	3
DRA	111	Theatre Appreciation	3
HUM	115	Critical Thinking	3
MUS	110	Music Appreciation	3
PHI	240	Introduction to Ethics	3

Natural Sciences and Mathematics Elective

(Select 3.0 hours from the following courses)

BIO	110	Principles of Biology	4
CHM	151	General Chemistry I	4
GEL	120	Physical Geology	4
MAT	121	Algebra/Trigonometry	3
PHY	151	College Physics I	4

Communication Elective

(Select 3.0 hours from the following courses)

COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3
ENG	112	Writing/Research in the Discipline	3
ENG	113	Literature-Based Research	3
ENG	114	Prof. Research and Reporting	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
HIS	111	World Civilizations I	3
POL	110	Introduction to Political Sciences	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

ACA	121	Managing a Team	1
ACA	220	Professional Transition	1
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	289	Networking Project	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 option from grouping below:

Option 1 – Microsoft Certified IT Professional Track

NOS	231	Windows Administration II	3
NOS	232	Windows Administration III	3
NOS	233	Windows Admin IV	3

and one of the following:

WBL	113	Work Based Learning I	3
CTS	220	Advanced Hardware/Software Support	3
NOS	220	Linux/Unix Admin I	3
SEC	160	Security Admin I	3

Option 2: Cisco Certified Network Professional Track

NET	270	Building Scalable Networks	3
NET	272	Multi-Layer Networks	3
NET	273	Internetworking Support	3

and one of the following:

WBL	113	Work-Based Learning I	3
CTS	220	Advanced Hardware/Software Support	3
NOS	220	Linux/Unix Admin I	3
SEC	160	Security Admin I	3

Option 3: Red Hat Certified Engineer Track

NOS	220	Linux/UNIX Administration I	3
NOS	221	Linux/UNIX Administration II	3
NOS	222	Linux/UNIX Administration III	3

and one of the following:

WBL	113	Work Based Learning I	3
CTS	220	Advanced Hardware/Software Support	3
SEC	160	Secure Admin I	3

Option 4: Data Storage & Virtualization Track

CTI	140	Virtualization Concepts	3
CTI	240	Virtualization Admin I	3
CTI	241	Virtualization Admin II	3

and one of the following

WBL	113	Work based Learning I	3
CTS	220	Advanced Hardware/Software Support	3
SEC	160	Security Admin I	3
NOS	220	Linux/UNIX Admin I	3

Graduation Requirements ..... 74 Credit Hours

Data Storage and Virtualization Diploma - D25340A, - Evening

This diploma under the Networking degree includes many courses from that degree, but requires a specific elective path following Virtualization. The skills and credentials that the student could earn with this diploma include those in that area of operating system virtualization, which is a prominent technology in cloud computing and datacenter operations.
The diploma includes courses in Cisco routing and switching, Microsoft desktop and server operating systems, and in-depth training with O/S virtualization. Instruction in these areas can qualify students to take industry certification exams in VMWare, Cisco, Microsoft, CompTIA, and NetApp.

This diploma also includes a co-op component, putting students to work in live datacenters.

CIS	110	Introduction to Computers	3
CTI	140	Virtualization Concepts	3
CTI	240	Virtualization Admin I	3
CTI	241	Virtualization Admin II	3
CTS	115	Info Sys Business Concept	3
CTS	120	Hardware/Software Support	3
ENG	111	Writing and Inquiry	3
ENG	114	Professional Research & Reporting	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NOS	110	Operating System Concepts	3
NOS	130	Windows Single User	3
NOS	230	Windows Admin I	3
WBL	113	Work Based Learning I	3

Completion Requirements ..... 42 Credit Hours

CISCO Certified Network Associate (CCNA) Certificate - 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) Certificate - 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
___	___	Major Elective	3

Major Electives

NOS	220	Linux/Unix Admin I	3
SEC	160	Security Admin I	3
WBL	113	Work-Based Learning I	3

Completion Requirements ..... 12 Credit Hours

Microsoft Certified IT Professional Certificate - C25340J

- Day and Evening

NOS	130	Windows Single User	3
NOS	230	Windows Administration I	3
NOS	231	Windows Administration II	3
NOS	232	Windows Administration III	3
NOS	233	Seminar in: Windows Admin IV	3

Completion Requirements ..... 15 Credit Hours

Linux/Red Hat Administration Certificate - 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

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 Degree - A25370

-Online

General Education Courses

ENG	111	Writing and Inquiry	3

Humanities and Fine Arts Electives

(Choose 3 credit hours from the following courses)

ART	111	Art Appreciation	3
MUS	110	Music Appreciation	3
HUM	110	Technology and Society	3
HUM	115	Critical Thinking	3

Mathematics Electives

(Choose 3 credit hours from the following courses)

MAT	110	Mathematical Measurement	3
BIO	110	Principles of Biology	4

Communications Electives

(Choose 3 credit hours from the following courses)

ENG	114	Professional Research and Reporting	3
ENG	112	Writing/Research in the Disc	3
COM	120	Intro Interpersonal Comm	3

Social and Behavioral Sciences Electives

(Choose 3 credit hours from the following courses)

PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3
ECO	251	Prin of Microeconomics	3
HIS	111	World Civilizations I	3

Major Courses

ACA	220	Professional Transition	1
BUS	260	Business Communication	3
OST	122	Office Computations	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	289	Administrative Office Management	3

OST Electives

Choose two credit hours from the following courses:

CIS	111	Basic PC Literacy	2
CTS	130	Spreadsheet	3
CTS	230	Advanced Spreadsheet	3
OST	131	Keyboarding	2
OST	132	Keyboard Speed Building	2
WBL	111	Work –Based Learning I	1
WBL	121	Work-Based Learning II	1
WBL	112	Work-Based Learning I	1

Graduation Requirements ..... 65 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	Writing and Inquiry	3

Major Courses

ACA	220	Professional Transition	1
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

Communications Electives

(Choose 3 credit hours from the following courses)

ENG	114	Professional Research and Reporting	3
ENG	112	Writing/Research in the Disc	3
COM	120	Intro Interpersonal Comm	3

OST Electives

(Choose a minimum of 2 credit hours from the following courses)

CIS	111	Basic PC Literacy	2
OST	131	Keyboarding	2
OST	132	Keyboard Speed Building	2
OST	153	Office Finance Solutions	2
OST	236	Adv. Word/Information Processing	3
OST	284	Emerging Technologies	2
OST	233	Desktop Publishing	3
WBL	111	Work-Based Learning I	1
WBL	121	Work-Based Learning II	1
WBL	112	Work-Based Learning I	1

Graduation Requirements ..... 37 Credit Hours

Office Specialist Certificate - 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	136	Word Processing	3
OST	140	Internet Comm/Research	2
OST	164	Text Editing Applications	3
OST	184	Records Management	3
OST	188	Issues in Office Technology	2

Completion Requirements ..... 18 Credit Hours

Office Documents Certificate - C25370B

-Online

The Office Documents 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	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 ..... 14 Credit Hours

Microsoft Office Specialist Certificate - C25370C

- Online

Major Courses

CTS	230	Advanced Spreadsheet	3
OST	140	Internet Communication/Research	2
OST	136	Word Processing	3
OST	137	Office Software Applications	3
OST	236	Advanced Word/Information Processing	3

Completion Requirements ..... 14 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	252	Legal Transcription I	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- Art & Modeling Degree - A25450A

-Day and Evening

General Education Courses

Required Courses

ACA	111	College Student Success	1
ENG	111	Writing and Inquiry	3
SGD	111	Intro. to SGD	3
SGD	112	SGD Design	3
SGD	113	SGD Programming	3
SGD	114	3D Modeling	3
SGD	116	Graphic Design Tools	3
SGD	117	Art for Games	3
SGD	134	SGD Quality Assurance	3
SGD	158	SGD Business Management I	3
SGD	162	SG 3D Animation	3
SGD	163	SG Documentation	3
SGD	164	SG Audio/Video	3
SGD	165	SG Character Development	3
SGD	166	SG Physiology/Kinesis	3
SGD	174	SG Level Design	3
SGD	212	SGD Design II	3
SGD	214	3D Modeling II	3
SGD	289	SGD Project	3
___	___	Communications Elective	3
___	___	Social/Behavioral Science Elective	3
___	___	Math Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Major Elective	2
___	___	Major Elective	2

Math Elective

(Select 3 credit hours from the following courses)

MAT	121	Algebra/Trigonometry I	3
MAT	143	Quantitative Literacy	3
MAT	171	Precalculus Algebra	4

Humanities/Fine Arts Elective

(Select 3 credit hours from the following courses)

DRA	126	Storytelling	3

ENG	126	Creative Writing I	3
HUM	130	Myth in Human Culture	3

Communication Elective
(Select 3 credit hours from the following courses)

ENG	112	Argument-Based Research	3
COM	120	Intro Interpersonal Communication	3

Social/Behavioral Science Elective
(Select 3 credit hours from the following courses)

ECO	151	Survey of Economics	3
HIS	111	World Civilizations I	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

Major Required Electives
(Select a minimum of 4 credit hours)

SGD	135	Serous Games	3
SGD	159	SGD Production Management	3
SGD	167	SG Ethics	3
SGD	168	Mobile SG Programming I	3
SGD	192	Selected Topics	2
SGD	237	Rigging 3D Models	3
SGD	244	3D Modeling III	3
SGD	268	Mobile SG Programming II	3
SGD	274	SG Level Design II	3
SGD	288	SGD Portfolio Design	2
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 71 Credit Hours

Simulation and Game Development-Programming Degree - A25450P

-Day and Evening

Required Courses

ACA	111	College Student Success	1
ENG	111	Writing and Inquiry	3
CIS	115	Intro to Prog & Logic	3
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	171	Flash SG Programming	3
SGD	174	SG Level Design	3
SGD	212	SGD Design II	3
SGD	285	SG Software Engin	3
SGD	289	SGD Project	3
___	___	Communications Elective	3
___	___	Social/Behavioral Science Elective	3
___	___	Math Elective	3
___	___	Humanities/Fine Arts Elective	3
___	___	Physical Science Elective	4
___	___	Major Elective I	3
___	___	Major Elective II	3
___	___	Major Elective III	2
___	___	Major Elective IV	2

Major Electives I
(Select 3 credit hours from the following)

CSC	134	C++ Programming	3
CSC	151	JAVA Programming	3

Major Electives II
(Select 3 credit hours from the following)

CSC	234	Adv C++ Programming	3
CSC	251	Adv JAVA Programming	3

Major Electives III & IV
(Select a minimum of credit hours from the following)

SGD	135	Serous Games	3
SGD	159	SGD Production Management	3
SGD	167	SG Ethics	3
SGD	168	Mobile SG Programming I	3
SGD	192	Selected Topics	2
SGD	237	Rigging 3D Models	3
SGD	244	3D Modeling III	3
SGD	268	Mobile SG Programming II	3
SGD	274	SG Level Design II	3
SGD	288	SGD Portfolio Design	2
WBL	112	Work-Based Learning I	2

Graduation Requirements ..... 72 Credit Hours

Modeling and Animation Diploma - D25450B

General Education Courses

ENG	111	Writing and Inquiry	3
___	___	Math Elective	3

Math Elective
(Select 3.0 hours from the following courses)

MAT	121	Algebra/Trigonometry I	3
MAT	143	Quantitative Literacy	3
MAT	171	Precalculus Algebra	3

Major Courses

SGD	111	Introduction to Simulation and Game Development	3
SGD	112	SGD Design	3
SGD	114	3D Modeling	3
SGD	116	Graphic Design Tools	3
SGD	117	Art for Games	3
SGD	162	SG 3D Animation	3
SGD	164	SG Audio/Video	3
SGD	165	SG Character Development	3
SGD	166	SG Physiology/Kinesis	3
SGD	212	SGD Design II	3
SGD	214	3D Modeling II	3
SGD	237	Rigging 3D Models	3
SGD	244	3D Modeling III	3

Graduation Requirements ..... 45 Credit Hours

Modeling and Animation Certificate - C25450A

SGD	111	Introduction to SGD	3
SGD	114	3D Modeling	3
SGD	162	SG 3D Animation	3
SGD	165	SG Character Development	3
SGD	214	3D Modeling II	3

Completion Requirements ..... 15 Credit Hours

Production Certificate - 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

Mobile Game Development Certificate - C25450C

SGD	112	SGD Design	3

SGD 114 3D Modeling 3
SGD 116 Graphic Design Tools 3
SGD 168 Mobile SG Programming 3
SGD 268 Mobile SG Programming II 3
___ ___ Major Elective

Major Electives
CIS 115 Intro to Prog & Logic 3
SGD 113 SGD Programming 3
Completion Requirements ..... 18 Credit Hours

Fundamentals I for Simulation and Game Development Certificate - C25450D

SGD 111 Introduction to SGD 3
SGD 112 SGD Design 3
SGD 116 Graphic Design Tools 3
___ ___ Elective 3

Electives
(Select 3.0 hours from the following courses)
CIS 115 Intro to Prog & Logic 3
SGD 117 Art for Games 3

Graduation Requirements ..... 12 Credit Hours

Fundamentals II for Simulation and Game Development Certificate - C25450E

SGD 114 3D Modeling 3
SGD 163 SD Documentation 3
SGD 212 SGD Design II 3
___ ___ Elective 3

Electives
(Select 3.0 hours from the following courses)
CSC 134 C++ Programming 3
CSC 151 JAVA Programming 3
SGD 113 SGD Programming 3

Graduation Requirements ..... 12 Credit Hours

Quality Assurance for Simulation and Game Development Certificate - C25450F

SGD 134 SG Quality Assurance 3
SGD 174 SG Level Design 3
___ ___ Elective I 3
___ ___ Elective II 3

Elective I
(Select 3.0 hours from the following courses)
CSC 234 Adv C++ Programming 3
CSC 251 Adv JAVA Programming 3
SGD 214 3D Modeling II 3

Elective II
(Select 3.0 hours from the following courses)
SGD 171 Flash SG Programming 3
SGD 162 SG 3D Animation 3

Graduation Requirements ..... 12 Credit Hours

Business for Simulation and Game Development Certificate - C25450G

___ ___ Elective I 3
SGD 158 SGD Business Management 3
SGD 164 SG Audio/Video 3
___ ___ Elective II 3

Elective I
(Select 3.0 hours from the following courses)
SGD 285 SG Software Engineering 3
SGD 165 SG Character Development 3

Elective II
(Select 3.0 hours from the following courses)
DBA 110 Database Concepts 3
SGD 167 SG Ethics 3
SGD 168 Mobile SG Programming I 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 135 Serious Games 3
SGD 159 SGD Production Management 3
SGD 268 Mobile SG Programming II 3

Graduation Requirements ..... 12 Credit Hours

Programming for Simulation and Game Development Certificate - C25450H

___ ___ Programming Elective 3
___ ___ Advanced Programming Elective 3
___ ___ SGD Programming Electives 6

Programming Elective
(Select 3.0 hours from the following courses)
CSC 134 C++ Programming 3
CSC 151 JAVA Programming 3

Advanced Programming Elective
(Select 3.0 hours from the following courses)
CSC 234 Adv C++ Programming 3
CSC 151 Adv JAVA Programming 3

SGD Programming Electives
(Select 6.0 hours from the following courses)
SGD 168 Mobile SGD Programming I 3
SGD 171 Flash SG Programming 3
SGD 271 Adv Flash Programming 3
SGD 268 Mobile SG Programming II 3
SGD 285 SG Software Engineering 3

Graduation Requirements ..... 12 Credit Hours

Level Design - C25450I

Required Courses
SGD 111 Introduction to SGD 3
SGD 114 3D Modeling 3
SGD 174 SG Level Design 3
SGD 274 SG Level Design II 3
Graduation Requirements ..... 12 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-Web Developer Degree - A25290A

-(Day/Online)

Major Courses

ENG	111	Writing and Inquiry	3
CIS	115	Introduction to Programming and Logic	3
DBA	110	Database Concepts	3
NET	110	Networking Concepts	3
WEB	110	Internet/Web Fundamentals	3
WEB	115	Web Markup and Scripting	3
WEB	125	Mobile Web Design	3
WEB	140	Web Development Tools	3
WEB	141	Mobile Interface Designs	3
WEB	180	Active Server Pages	3
WEB	182	PHP Programming	3
WEB	187	Prog for Mobile Devices	3
WEB	210	Web Design	3
WEB	213	Internet Marketing & Analytics	3
WEB	215	Advanced Markup and Scripting	3
WEB	225	Content Management Systems	3
WEB	250	Database-Driven Websites	3
WEB	287	Web E-Portfolio	2
___	___	BUS 110 or BUS 137 or BUS 151 or CTS 115	3
___	___	COM 120 or COM 231	3
___	___	ECO 252 or PSY 150	3
___	___	WEB 260 or WBL 112	3
___	___	MAT 121 or MAT 143 or MAT 152	3
___	___	HUM 115 or HUM 230	3

Graduation Requirements ..... 70 Credit Hours

Web Technologies-Web Developer Degree - A25290A

-(Day/Online)

Major Courses

ENG	111	Writing and Inquiry	3
CIS	115	Introduction to Programming and Logic	3
DBA	110	Database Concepts	3
NET	110	Networking 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	125	Mobile Web Design	3
WEB	140	Web Development Tools	3
WEB	182	PHP Programming	3
WEB	187	Prog for Mobile Devices	3
WEB	210	Web Design	3
WEB	213	Internet Marketing & Analytics	3
WEB	214	Social Media	3
WEB	250	Database-Driven Websites	3
WEB	287	Web E-Portfolio	2
___	___	BUS 110 or BUS 137 or BUS 151 or CTS 115	3
___	___	COM 120 or COM 231	3
___	___	ECO 252 or PSY 150	3
___	___	GRD 141 or WEB 141	3
___	___	MAT 121 or MAT 143 or MAT 152	3
___	___	HUM 115 or HUM 230	3
___	___	WEB 211 or WBL 112	2

Graduation Requirements ..... 70 Credit Hours

Mobile Content Development Diploma - D25290

– Day and Online

The Mobile Content Development Diploma covers the developing of mobile content, both apps (applications) and websites. Focus is on iOS and Android operating systems.

Major Courses

___	___	Communication Elective	3
___	___	Natural Science/Math Elective	3
CIS	115	Intro to Prog to 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
CSC	151	JAVA Programming	3
WEB	187	Prog for Mobile Devices	3
SGD	168	Mobile SG Programming I	3
WEB	115	Web Markup and Scripting	3
WEB	125	Mobile Web Design	3
WEB	151	Mobile Application Dev I	3
SGD	268	Mobile SG Programming 2	3
WEB	251	Mobile Application Dev II	3

Natural Science/Math Electives

(Select 3.0 hours from the following courses)

MAT	121	Algebra/Trigonometry	3
MAT	143	Quantitative Literacy	3
MAT	152	Statistical Methods	3

Communication Elective

(Select 3.0 hours from the following courses)

ENG	111	Writing and Inquiry	3
COM	120	Intro Interpersonal Communication	3
COM	231	Public Speaking	3
ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	3
ENG	114	Professional Research & Reporting	3

Completion Requirements ..... 45 Credit Hours

Android Application Certificate - C25290E

– Day and Online

This Certificate covers the development of apps for iOS devices.

CIS	115	Introduction to Programming and Logic	3
CSC	151	JAVA Programming	3
WEB	141	Mobile Interface Design	3
WEB	151	Mobile Application Dev I	3

Completion Requirements ..... 12 Credit Hours

iOS Application Developer Certificate - C25290D

-Day and Online

This Certificate covers the development of apps for Android devices.

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 Certificate - C25290C

–Day and 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	125	Mobile Web Design	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 Certificate - C25290A

– Day and 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	215	Adv. Markup and Scripting	3
WEB	225	Content Management Systems	3

Completion Requirements .....18 Credit Hours

Advanced Web Developer Certificate - C25290F

– Day and Online

This certificate teaches advanced Web Developer concepts.

DBA	110	Database Concepts	3
WEB	187	Prog for Mobile Devices	3
WEB	213	Internet Marketing and Analytics	3
WEB	250	Database Driven Websites	3
WEB	260	E-Commerce Infrastructure	3

Completion Requirements .....15 Credit Hours

HEALTH SCIENCES

Health Sciences Division

Health Sciences Information: 919-747-0400

Dean Dianne Hinson
Phone: 919-747-0007
Email: dbhinson@waketech.edu

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.

1. Click on the "**Program Name**" to go to the program's web page
2. Click on the "**Program of Study**" to see specific course requirements for that program

Programs may be offered during the day, evening, online, or a combination. Students should refer to WebAdvisor for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully online.

Program Name	Program Code
Associate Degree Nursing – ***AAS Degree***	A45110
Associate Degree Nursing (LPN to RN Advanced Placement Option) – ***AAS Degree***	A45110
Associate Degree Nursing (RIBN Dual-Enrollment Option) – ***AAS Degree***	A45110
Computed Tomography Technology - ***Certificate***	C45200
Dental Assisting - Diploma	D45240
Dental Hygiene – AAS Degree	A45260
Emergency Medical Science – ***AAS Degree***	A45340
General Occupational Technology – ***AAS Degree***	A55280
Health and Fitness Science – ***AAS Degree***	A45630
Human Services Technology – ***AAS Degree***	A45380
Human Services Technology/Substance Abuse – ***AAS Degree***	A4538E
Substance Abuse - ***Certificate***	C4538E
Magnetic Resonance Imaging - ***Diploma***	D45800
Medical Assisting – ***AAS Degree***	A45400
Medical Assisting - ***Diploma***	D45400
Medical Laboratory Technology – ***AAS Degree***	A45420
Pharmacy Technology – ***AAS Degree****	A45580
Pharmacy Technology – ***Diploma****	D45580
Phlebotomy - ***Certificate***	C45600
Radiography – AAS Degree	A45700
Surgical Technology - ***Diploma***	D45740
Therapeutic Massage - ***Diploma***	D45750

***Collaborative Agreements**

Pharmacy Technology AAS *Degree and* ***Pharmacy Technology Diploma*** *agreement with Johnston Community College*

Associate Degree Nursing (RIBN Dual-Enrollment Option) AAS *Degree agreement with Winston-Salem State University*

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	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	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
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 ..... 72 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	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	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
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 ..... 72 Credit Hours

Associate Degree Nursing - A45110 RIBN Option

The Triangle Triad Regionally Increasing Baccalaureate Nurses (RIBN) Option is a dual-enrollment option offered in collaboration with Winston-Salem State University. An Associate of Applied Science in Nursing is awarded at the end of the third year from Wake Technical Community College and a Baccalaureate in Nursing from Winston-Salem State University at the end of year four.

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 Certificate - C45200

-Day

Major Courses

CAT	210	CT Physics and Equipment	3
CAT	211	CT Procedures	4
CAT	224	CT Clinical Practicum	4
CAT	226	CT Clinical Practicum	6
CAT	261	CT Exam Prep	1

Completion Requirements ..... 18 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 is eligible to take the Dental Assisting National Board Exam in order to be classified as 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,

Wake Smiles, and private general and specialty dental practices within Wake County.

Dental Assisting Diploma- D45240

-Day

General Education Courses

BIO	106	Introduction to Anatomy/ Physiology/Microbiology	3
COM	120	Interpersonal Communication	3
ENG	111	Writing and Inquiry	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 Degree- A45260

-Day

General Education Courses

ENG	111	Writing and Inquiry	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 provides individuals with the knowledge, skills and attributes to provide advanced emergency medical care as a paramedic for critical and emergent patients who access the emergency medical system and prepares graduates to enter the workforce.

Students will gain complex knowledge, competency, and experience while employing evidence-based practice under medical oversight, and serve as a link from the scene into the healthcare system.

Graduates of this program may be eligible to take state and/or national certification examinations. Employment opportunities include providers of emergency medical services, fire departments, rescue agencies, hospital specialty areas, industry, educational and government agencies.

Emergency Medical Science Degree - A45340

-Day

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	3
MAT	110	Math Measurement & Literacy	3
PHI	240	Introduction to Ethics	3
PSY	150	General Psychology	3

Major Courses

BIO	163	Basic Anat & Physiology	5
EMS	110	EMT	8
EMS	122	EMS Clinical Practicum I	1
EMS	125	EMS Instructor Methodology	2
EMS	130	Pharmacology	4
EMS	131	Advanced Airway Management	2
EMS	140	Rescue Scene Management	2
EMS	150	Emergency Vehicles & EMS Comm	2
EMS	160	Cardiology I	2
EMS	220	Cardiology II	3
EMS	221	EMS Clinical Practicum II	2
EMS	231	EMS Clinical Pract III	3
EMS	240	Patients W/ Special Challenges	2
EMS	241	EMS Clinical Practicum IV	4
EMS	250	Medical Emergencies	4
EMS	260	Trauma Emergencies	2
EMS	270	Life Span Emergencies	3
EMS	285	EMS Capstone	2
MED	120	Survey of Med Terminology	2

Graduation Requirements ..... 70 Credit Hours

GENERAL OCCUPATIONAL TECHNOLOGY

-Day and Evening

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 Degree - 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
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

HEALTH AND FITNESS SCIENCE

The Health and Fitness Science program is designed to provide students with the knowledge and skills necessary for employment in the fitness and exercise industry.

Students will be trained in exercise science and be able to administer basic fitness tests and health risk appraisals, teach specific exercise and fitness classes and provide instruction in the proper use of exercise equipment and facilities.

Graduates should qualify for employment opportunities in commercial fitness clubs, YMCA's/YWCA's, wellness programs in business and industry, Parks & Recreation Departments and other organizations implementing exercise & fitness programs.

HEALTH AND FITNESS SCIENCE - A45630

General Education Courses

ACA 111 College Student Success 1
COM 120 Intro to Interpersonal Communication 3
OR
COM 231 Public Speaking 3
ENG 111 Expository Writing 3
HUM 115 Critical Thinking 3
PSY 150 General Psychology 3
MAT 143 Quantitative Literacy 3
OR
MAT 171 Precalculus Algebra 4

Major Courses

BIO 155 Nutrition 3
BIO 168 Anatomy and Physiology I 4
BIO 169 Anatomy and Physiology II 4
HEA 112 First Aid & CPR 2
PED 111 Physical Fitness I 1
PED 113 Aerobics I 1
PED 117 Weight Training I 1
PED 118 Weight Training II 1
PSF 110 Exercise Science 4
PSF 111 Fitness and Exer Testing 4
PSF 114 Phys Fit Theory & Instr 4
PSF 116 Pvnt & Care Exer Injuries 3
PSF 118 Fitness Facility Mgmt 4
PSF 120 Group Exer Instruction 3
PSF 210 Personal Training 3
PSF 212 Exercise Programming 3
PSF 218 Lifestyle Chng & Wellness 4
Other Major Hours 3-4

Graduation Requirements ..... 68-70 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 Degree - A45380

-Day, Evening

General Education Courses

BIO	161	Introduction to Human Biology	3
CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3
ENG	114	Prof Research and Reporting	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
PSY	281	Abnormal Psychology	3
SOC	213	Sociology of Family	3
		Humanities/Fine Arts Elective	3

Major Courses

WBL	111	Work-Based Learning I	1
WBL	115	Work-Based Learning Seminar I	1
GRO	120	Gerontology	3
HSE	110	Introduction to Human Services	3
HSE	112	Group Process I	2
HSE	123	Interviewing Techniques	3
HSE	125	Counseling	3
HSE	127	Conflict Resolution	3
HSE	135	Orientation Lab I	1
HSE	210	Human Services Issues	2
HSE	220	Case Management	3
HSE	225	Crisis Intervention	3
HSE	245	Stress Management	3
SAB	110	Substance Abuse Overview	3
SWK	113	Working with Diversity	3

Major Electives

Select 3 hours from the following courses

HSE	145	Child Abuse and Neglect	3
HSE	227	Child & Adolescence in Crisis	3
HSE	251	Activity Planning	3
SWK	110	Introduction to Social Work	3

Graduation Requirements ..... 67 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 Degree - A4538E

-Day, Evening

General Education Courses

BIO	161	Introduction to Human Biology	3
CIS	110	Introduction to Computers	3
ENG	111	Writing and Inquiry	3
ENG	114	Prof Research and Reporting	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
PSY	281	Abnormal Psychology	3
SOC	213	Sociology of Family	3
		Humanities/Fine Arts Elective	3

Major Courses

WBL	111	Work-Based Learning I	1
WBL	115	Work-Based Learning Seminar I	1
HSE	110	Introduction to Human Services	3
HSE	112	Group Process I	2
HSE	123	Interviewing Techniques	3
HSE	125	Counseling	3
HSE	135	Orientation Lab I	1
HSE	210	Human Services Issues	2
HSE	225	Crisis Intervention	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 ..... 70 Credit Hours

Human Services Technology / Substance Abuse Certificate - C4538E

This Certificate is designed for individuals who already hold a bachelor or master's degree in a Human Services related field. The certificate **assists** students in **meeting all the SAB educational requirements** for Certification and/or Licensure for the North Carolina Substance Abuse Professional Practice Board (NCSAPPB).

Students who do not have an Associate's degree, Bachelor or Master's degree in a Human Service related field are not likely to obtain employment as a Substance Abuse Counselor with only the Substance Abuse Certificate.

-Day, Evening

Major Courses

HSE	112	Group Processes I	2
SAB	120	Intake and Assessment	3
SAB	135	Addictive Process	3
SAB	210	Substance Abuse Counseling	3
SAB	240	Substance Abuse Issues	3

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 Diploma - D45800

-Day

General Education Courses

ENG	111	Writing and Inquiry	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	Writing and Inquiry	3
CIS	111	Basic PC Literacy	2
MAT	110	Math Measurement & Literacy	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	183	Electronic Med Records I	5
MED	260	MED Clinical Practicum	5
MED	264	Medical Assisting Overview	2

Graduation Requirements ..... 48 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.

-Day

Additional Courses Required for the Medical Assisting Degree – A45400

Additional Major Courses

MED	232	Medical Insurance Coding	2
MED	270	Symptomatology	3
MED	272	Drug Therapy	3
MED	274	Diet Therapy/Nutrition	3

Additional General Education Courses

SPA	120	Spanish for the Workplace	3
		Humanities/Fine Art elective	3

Choose one:

ENG	112	Writing/Research in the Disc	3
ENG	114	Professional Research and Reporting	3
COM	120	Interpersonal Communication	3
COM	231	Public Speaking	3

Choose one:

PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

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 Degree - A45420

-Day

General Education Courses

ENG	111	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	3
MAT	143	Quantitative Literacy	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

PHARMACY TECHNOLOGY

The Pharmacy Technology Program prepares individuals to become pharmacy technicians. These allied health professionals assist and support licensed pharmacists in providing prescription medications, over-the-counter drugs, medical equipment and supplies, pharmaceutical care services, and other health care products and services for patients.
Students will gain a broad knowledge of pharmacology, drug uses, actions, interactions and side effects, medication therapy, pharmaceutical calculations, anatomy and physiology, drug delivery systems, pharmacy practice, purchasing and inventory control. and pharmacy law and regulations. Through simulated pharmacy laboratory activities, students will increase their skills in using pharmacy computer software, interpreting prescriptions, processing medication orders, compounding IV admixtures and parenteral nutrition, compounding pediatric medications, creating veterinary dosage forms, managing pharmacy operations, and utilizing critical thinking to resolve patient problems.

Through the clinical experience, students will increase knowledge and skills in creating and maintaining patient profiles, effectively participating on the health care team, filing insurance claims, managing automated medication dispensing systems, operating robotic pharmacy equipment, staffing patient care clinics, providing exceptional customer service, leading quality improvement programs, supervising and managing pharmacy technicians, and reconciling medications for ER patients. The clinical practice will take place in hospital, community and specialty pharmacies. Graduates may be employed in hospitals, medical centers, private and chain pharmacies, and specialty pharmacies, including medication compounding, long term care medication therapy management, and IV infusion pharmacies. . Graduates will be prepared to take the national Certification Examination administered 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 Degree - A45580

General Education Courses

CIS	111	Basic PC Literacy	2
ENG	111	Writing & Inquiry	3
ENG	112	Writing/Research in the Disciplines	3
MAT	110	Mathematical Measurement & Literacy	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 ..... 66 Credit Hours

Pharmacy Technology Diploma - D45580

General Education Courses

ENG	111	Writing & Inquiring	3
MAT	110	Mathematical Measurement & Literacy	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	134	Pharmacy Clinical	4
PHM	140	Trends in Pharmacy	2
PHM	155	Community Pharmacy	3
PHM	165	Pharmacy Prof Practice	2

Graduation Requirements ..... 40 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

Choose one of the following:

PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3

Completion Requirements ..... 12 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 Degree - A45700

-Day

General Education Courses

BIO	163	Basic Anatomy and Physiology	5
ENG	111	Writing and Inquiry	3
ENG	112	Writing/Research in the Disc	3
HUM	115	Critical Thinking	3
PSY	150	General Psychology	3
MAT	143	Quantitative Literacy	3

Major Courses

RAD	110	RAD Intro & Patient Care	3
RAD	111	RAD Procedures I	4
RAD	112	RAD Procedures II	4
RAD	121	Radiographic Imaging I	3
RAD	122	Radiographic Imaging II	2
RAD	131	Radiographic Physics I	2
RAD	151	RAD Clinical Ed I	2
RAD	161	RAD Clinical Ed II	5
RAD	171	RAD Clinical Ed III	4
RAD	211	RAD Procedures III	3
RAD	231	Radiographic Physics II	2
RAD	241	Radiobiology/Protection	2
RAD	245	Image Analysis	2
RAD	251	RAD Clinical Ed IV	7
RAD	261	RAD Clinical Ed V	7
RAD	271	Radiography Capstone	1

Graduation Requirements: ..... 73 Credit Hours

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 Diploma- D45740

-Day

General Education Courses

ENG	111	Writing and Inquiry	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 Diploma - D45750

-Day

General Education Courses

ENG	111	Writing and Inquiry	3
PSY	118	Interpersonal Psychology	3
	Or		
PSY	150	General Psychology	3

Major Courses

ACA	111	College Student Success	1
BIO	155	Nutrition	3
BIO	163	Basic Anatomy and Physiology	5
MTH	110	Fundamentals of Massage	10
MTH	120	Therapeutic Massage Applications	10
MTH	121	Clinical Supplement I	1
MTH	125	Ethics of Massage	2
MTH	130	Therapeutic Massage Mgmt	2

Graduation Requirements ..... 40 Credit Hours

COURSE PREFIX IDENTIFICATION

ACA Academic Related
ACC Accounting
AHR Air Conditioning, Heating, & Refrigeration
ANT Anthropology
ARA Arabic
ARC Architecture
ART Art
AST Astronomy
ATR Automation and Robotics
AUT Automotive
BAS Business Analytics
BIO Biology
BPA Baking and Pastry Arts
BPM Bioprocessing Manufacturing Tech
BPR Blueprint Reading
BUS Business
CAT Computed Tomography
CCT Cyber Crime Technology
CEG Civil Engineering and Geomatic
CET Computer Engineering Technology
CHI Chinese
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
CTI Computer Tech Integration
CTS Computer Information Technology
CUL Culinary
DBA Database Management Technology
DDF Design Drafting
DDT Developmental Disabilities
DEN Dental
DES Design: Creative
DFT Drafting
DMA Developmental Mathematics
DMS Developmental Math Shell
DRA Drama/Theatre
DRE Developmental Reading/English
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
HIT Health Information Technology
HOR Horticulture
HPC High Performance Computing
HRM Hospitality Management
HSE Human Services
HUM Humanities
HYD Hydraulics and Pneumatics
IMG Imaging
INT International Business
ISC Industrial Science
JOU Journalism
LAR Landscape Architecture
LEO Lasers and Optics
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
NUT Nutrition
OMT Operations Management
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
PSF Physical Fitness Technology
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

COURSE PREFIX IDENTIFICATION

SST Sustainability Technology
SUR Surgical Technology
SWK Social Work
TNE Telecommunications and Network Engineering Technology
TRN Transportation Technology
WBL Work-Based Learning
WEB Web Technologies
WLD Welding

COURSE DESCRIPTIONS

All courses are identified by the following example:

Course Prefix-Course Number	Course Title	Class Hours	Lab Hours	Clinical Hours	Credit Hours
AST-152	General Astronomy II	3	0	0	3

Prerequisites: AST-151 ← **courses that must be taken before this course**

Corequisites: AST-152A ← **courses that must be taken along with this course**

Course Description

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

ACADEMIC RELATED (ACA Prefix)

ACA-090 Student Success Strategies 3 0 0 3
Prerequisites:
Corequisites:
This course is intended to provide students with skills and strategies to promote success in college, career, and life. Topics include the College's physical, academic, and social environment, promotes personal development, and cultivates learning strategies essential for student success. Upon completion, students should be able to manage their learning experiences to meet educational and life goals.

ACA-111 College Student Success 1 0 0 1
Prerequisites:
Corequisites:
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-120 Career Assessment 1 0 0 1
Prerequisites:
Corequisites:
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-121 Managing a Team 1 0 0 1
Prerequisites:
Corequisites:
This course focuses on the process of the individual with an awareness of the reality in the collective teamwork approach for the workplace emphasizing process-orientation. Topics include how teams work, team effectiveness, team-building techniques, positive thinking, and leadership principles. Upon completion, students should be able to demonstrate an understanding of how teamwork strengthens ownership, involvement, and responsibility in the workplace.

ACA-122 **College Transfer Success** 0 2 0 1
Prerequisites: Take 1 group; # Take DRE-096(S23641); # Take ENG-070(S16349) RED-070(S10648)
Corequisites:
This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college policies and culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions.

ACA-220 **Professional Transition** 1 0 0 1
Prerequisites:
Corequisites:
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)

ACC-120 **Principles of Financial Accounting** 3 2 0 4
Prerequisites:
Corequisites:
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.

ACC-121 **Principles of Managerial Accounting** 3 2 0 4
Prerequisites: Take ACC-120(S10290)
Corequisites:
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.

ACC-122 **Principles of Financial Accounting II** 3 0 0 3
Prerequisites: Take ACC-120(S20278)
Corequisites:
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-129 **Individual Income Taxes** 2 2 0 3
Prerequisites: Take ACC-120(S20278)
Corequisites:
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: Take ACC-129(S20283)
Corequisites:
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:
Corequisites:
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 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:
Corequisites:
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: Take 1 group; # Take ACC-115(S12924) CIS-110(S21058); # Take ACC-115(S12924) CIS-111(S21059); # Take ACC-120(S10290) CIS-110(S21058); #Take ACC-120(S10290) CIS-111(S21059); Take ACC-115(S12924) or ACC-120(S10290)
Corequisites:
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.

ACC-149 **Intro to Acc Spreadsheets** 1 2 0 2
Prerequisites: Take 1 group; #Take ACC-115(S12924) CIS-110(S21058); # Take ACC-115(S12924) CIS-111(S21059); # Take ACC-120(S10290) CIS-110(S21058); #Take ACC-120(S10290) CIS-111(S21059); Take ACC-115(S12924) or ACC-120(S10290)
Corequisites:
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 **Accounting Software Applications** 1 2 0 2
Prerequisites: Take 1 group; # Take ACC-115(S12924) CIS-110(S21058); # Take ACC-115(S12924) CIS-111(S21059); #Take ACC-120(S10290) CIS-110(S21058); #Take ACC-120(S10290) CIS-111(S21059); Take ACC-115(S12924) or ACC-120(S10290)
Corequisites:
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.

ACC-151 **Accounting Spreadsheet Applications** 1 2 0 2
Prerequisites: Take ACC-149(S16200)
Corequisites:
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 Advanced Software Applications 1 2 0 2
Prerequisites: Take ACC-150(S20275)
Corequisites:
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:
Corequisites:
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: Take MAT-110(S23926)
Corequisites:
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: Take ACC-120(S20278)
Corequisites:
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 businesses.

ACC-215 Ethics in Accounting 3 0 0 3
Prerequisites: Take ACC-121(S20282)
Corequisites:
This course introduces students to professional codes of conduct and ethics adopted by professional associations and state licensing boards for accountants, auditors, and fraud examiners. Topics include research and discussion of selected historical and contemporary ethical cases and issues as they relate to accounting and business. Upon completion, students should be able to apply codes, interpret facts and circumstances, as they relate to accounting firms and business activities.

ACC-220 Intermediate Accounting I 3 2 0 4
Prerequisites: Take ACC-120(S20278)
Corequisites:
This course is a continuation of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and extensive analysis of balance sheet components. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards.

ACC-221 Intermediate Accounting II 3 2 0 4
Prerequisites: Take ACC-220(S10646)
Corequisites:
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: Take ACC-121(S10328)
Corequisites:
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: Take ACC-121(S10328)
Corequisites:
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: Take ACC-220(S10646)
Corequisites:
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 **Gov & Not-For-Profit Acct** 3 0 0 3
Prerequisites: Take ACC-121(S10328)
Corequisites:
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 **Advanced Accounting** 3 0 0 3
Prerequisites: Take ACC-220(S10646)
Corequisites:
This course is designed to analyze the special accounting issues, which may include business combinations, partnerships, international accounting, estates, and trusts. Emphasis is placed on analyzing transactions and preparing working papers and financial statements. Upon completion, students should be able to solve a wide variety of problems by advanced application of accounting principles and procedures.

ACC-268 **Information Systems & Internal Controls** 3 0 0 3
Prerequisites: Take ACC-121(S20282)
Corequisites:
This course covers the design and operation of accounting information systems, with emphasis placed upon transaction cycles and the necessary controls for reliable data. Topics include accounting procedures; authorizing, documentation, and monitoring; flowcharting, data flow diagrams, and scheduling; and some auditing concepts. Upon completion, students should be able to demonstrate an analytical problem-solving ability to communicate effectively their analysis in written and oral presentations.

ACC-269 **Auditing & Assurance Services** 3 0 0 3
Prerequisites: Take ACC-220(S10646)
Corequisites:
This course introduces selected topics pertaining to the objectives, theory and practices in engagements providing auditing and other assurance services. Topics include planning, conducting and reporting, with emphasis on the related professional ethics and standards. Upon completion, students should be able to demonstrate an understanding of the types of professional services, the related professional standards, and engagement methodology.

AIR CONDITIONING, HEATING, & REFRIGERATION (AHR Prefix)

AHR-110 Introduction to Refrigeration 2 6 0 5
Prerequisites:
Corequisites:
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-110 Introduction to Refrigeration 2 6 0 5
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
This course covers the installation procedures, system operations, and maintenance of residential and light commercial comfort cooling systems. Topics include terminology, component operation, and testing and repair of equipment used to control and produce assured comfort levels. Upon completion, students should be able to use psychrometrics, manufacturer specifications, and test instruments to determine proper system operation.

AHR-114 Heat Pump Technology 2 4 0 4
Prerequisites: Take AHR-110(S14098) or AHR-113(S14131)
Corequisites:
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: Take AHR-110(S14098)
Corequisites:
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: Take AHR-111(S14148) ELC-111 or ELC-112(S21587)
Corequisites:
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 analyis 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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychrometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system.

AHR-212 Advanced Comfort Systems 2 6 0 4
Prerequisites: Take AHR-114(S14084)
Corequisites:
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-213 HVACR Building Code 1 2 0 2
Prerequisites:
Corequisites:
This course covers the North Carolina codes that are applicable to the design and installation of HVACR systems. Topics include current North Carolina codes as applied to HVACR design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of North Carolina codes that apply to specific areas of the HVACR trade.

AHR-215 Commercial HVAC Controls 1 3 0 2
Prerequisites: Take AHR-111(S23420) ELC-111 or ELC-112(S23481)
Corequisites:
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: Take AHR-211(S10410)
Corequisites:
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: Take AHR-112(S14102)
Corequisites:
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: Take AHR-110(S14098)
Corequisites:
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:
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.

AHR-263 Energy Management 1 3 0 2
Prerequisites: Take AHR-125(S13194) or AHR-215(S10409)
Corequisites:
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)

ANT-210 General Anthropology 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673)
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673);
Corequisites:
This course introduces the scientific study of human evolution and adaptation. Emphasis is placed on evolutionary theory, population genetics, biocultural adaptation and human variation, as well as non-human primate evolution, morphology, and behavior. Upon completion, students should be able to demonstrate an understanding of the biological and cultural processes which have resulted in the formation of the human species.

ANT-230A Physical Anthropology Lab 0 2 0 1
Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673)
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: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643);Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643);
Corequisites:
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.

ARABIC (ARA Prefix)

ARA-111 Elementary Arabic I 3 0 0 3
Prerequisites: Take ENG-090
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.

ARA-112 Elementary Arabic II 3 0 0 3
Prerequisites: Take 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.

ARA-181 Arabic Lab I 0 2 0 1
Prerequisites: Take ENG-090
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.

ARA-182 Arabic Lab II 0 2 0 1
Prerequisites: Take 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.

ARA-211 Intermediate Arabic I 3 0 0 3
Prerequisites: Take ARA-112;
Corequisites:
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.

ARA-212 Intermediate Arabic II 3 0 0 3
Prerequisites: Take ARA-211
Corequisites:
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.

ARCHITECTURE (ARC Prefix)

ARC-111 Introduction to Architectural Technology 1 6 0 3
Prerequisites:
Corequisites:
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 Construction Materials & Methods 3 2 0 4
Prerequisites:
Corequisites: ARC-111
This course introduces construction materials and methodologies. Topics include construction terminology, traditional and alternative 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.

ARC-113 Residential Architectural Technology 1 6 0 3
Prerequisites: Take ARC-111
Corequisites: ARC-112
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:
Corequisites: 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:
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: Take ARC-112(S23271) or CAR-111(S16248)
Corequisites:
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 construction projects.

ARC-132 Specifications & Contracts 2 0 0 2
Prerequisites: Take ARC-112(S11752)
Corequisites:
This course covers the development of written specifications and the implications of different contractual arrangements. Topics include specification development, contracts, bidding material research, and agency responsibilities. Upon completion, students should be able to write a specification section and demonstrate the ability to interpret contractual responsibilities.

ARC-141 Elementary Structures for Architecture 4 0 0 4
Prerequisites: Take 1 group; # Take ARC-111 MAT-121(S23927);
Corequisites:
This course covers concepts of elementary structures in architecture. Topics include structural form, statics, strength of materials, structural behavior, and the relationship between structures and architectural form. Upon completion, students should be able to size simple structural elements.

ARC-160 Residential Design 1 6 0 3
Prerequisites: Take 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 Tech 1 4 0 3
Prerequisites: Take ARC-221
Corequisites:
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-193A Selected Topics in Advanced Revit 1 4 0 3
Prerequisites: Take ARC-221
Corequisites:
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 Construction Technology 1 6 0 3
Prerequisites: Take ARC-113 ARC-114(S10248) ARC-212(S10754); Take ARC-111
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 Constr Tech 1 6 0 3
Prerequisites: Take 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: Take ARC-111 ARC-112(S11752) ARC-113 ARC-114(S10248) ARC-211;
Corequisites: ARC-264
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: Take ARC-111 ARC-112(S11752) MAT-121(S13643
Corequisites:
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 Architectural Strength of Materials 3 0 0 3
Prerequisites: Take ARC-111 ARC-112(S11752) MAT-121(S13643)
Corequisites:
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: Take ARC-114(S10248)
Corequisites:
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.

ARC-221 Architectural 3-D CAD 1 4 0 3
Prerequisites: Take ARC-114(S10248)
Corequisites:
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-225 Architectural Building Information Modeling I 1 3 0 2
Prerequisites:
Corequisites:
This course is an introduction to the fundamentals of Building Information Modeling (BIM) as a construction documentation system. Topics include basic parametric modeling, creating new types and families of components, and using 3D models to create design drawings. Upon competition, students should be able to use BIM software to create, edit, and print rudimentary architectural 3D computer models.

ARC-225A Architectural Building Information Modeling I Lab 0 3 0 1
Prerequisites:
Corequisites: ARC-225
This course provides a laboratory setting to enhance architectural BIM skills. Emphasis is placed on further development of basic parametric modeling, creating new types and families of components. Upon competition, students should be able to use BIM software to create, edit, and print rudimentary architectural 3D computer models.

ARC-226 Architectural Building Information Modeling II 1 3 0 2
Prerequisites: Take ARC-225
Corequisites:
This course covers advanced concepts of Building Information Modeling (BIM) including complex drawing generation and inter-disciplinary collaboration. Topics include advanced parametric modeling and model analysis, inter-disciplinary coordination, design web format models, material take-off, schedules, and rendering. Upon completion, students should be able to apply BIM software to create full 3D project models and convert them to scaled working or presentation drawings.

ARC-226A Architectural Building Information Modeling II Lab 0 3 0 1
Prerequisites: Take ARC-225
Corequisites: ARC-226
This course provides a laboratory setting to enhance advanced architectural BIM skills. Emphasis is placed on further development of advanced parametric modeling and model analysis, inter-disciplinary coordination, design web format models, material take-off, schedules, and rendering. Upon completion, students should be able to apply BIM software to create full 3D project models and convert them to scaled working or presentation drawings.

ARC-230 Environmental Systems 3 3 0 4
Prerequisites: Take 1 group; # Take ARC-111 MAT-121(S23927); # Take ARC-111 MAT-171(S23934)
Corequisites:
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-230 Environmental Systems 3 3 0 4
Prerequisites: Take 1 group; # Take ARC-111 MAT-121(S20804); # Take ARC-111 MAT-171(S20807); # Take ARC-111 MAT-151(S21171); # Take ARC-111 MAT-161(S20916); # Take ARC-111 MAT-175
Corequisites:
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-231 Architectural Presentations 2 4 0 4
Prerequisites: Take 1 group; # Take ARC-111 ARC-264(S22026); # Take ARC-111 ARC-225
Corequisites:
This course introduces architectural presentation techniques. Topics include perspective drawing, shadow projection, texturization, rendered plans, elevations, and other related topics. Upon completion, students should be able to present ideas graphically and do rendered presentation drawings.

ARC-235 Architectural Portfolio 2 3 0 3
Prerequisites: Take 1 group; # Take ARC-113; # Take LAR-113(S23293); # Take DES-230
Corequisites:
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: Take 1 group; # Take ARC-111 MAT-121(S20804); # Take LAR-111(S10088) MAT-121(S20804); Take ARC-111 or LAR-111(S10088)
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: Take ARC-111 ARC-112(S11752) LAR-111(S10088) or LAR-112(S10042)
Corequisites:
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:
Corequisites:
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: Take ARC-111
Corequisites:
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: Take ARC-112(S23271) or LAR-112(S23292)
Corequisites:
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-293A **Selected Topics in Architecture** 2 2 0 3
Prerequisites: Take ARC-261 LAR-120 or DES-235
Corequisites:
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.

ART (ART Prefix)

ART-111 **Art Appreciation** 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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:
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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: Take 1 group; #Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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 Two-Dimensional Design 0 6 0 3
Prerequisites: Take 1 group; # Take ENG-070(S16349) RED-070(S10648); #Take DRE-096(S23641)
Corequisites:
This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art.

ART-122 Three-Dimensional Design 0 6 0 3
Prerequisites: Take 1 group; #Take ENG-070(S16349) RED-070(S10648); # Take DRE-096(S23641)
Corequisites:
This course introduces basic studio problems in three-dimensional visual design. Emphasis is placed on the structural elements and organizational principles as applied to mass and space. Upon completion, students should be able to apply three-dimensional design concepts.

ART-131 Drawing I 0 6 0 3
Prerequisites: Take 1 group; # Take ENG-070(S16349) RED-070(S10648); #Take DRE-096(S23641)
Corequisites:
This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes.

ART-132 Drawing II 0 6 0 3
Prerequisites: Take ART-131
Corequisites:
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-135 Figure Drawing I 0 6 0 3
Prerequisites: Take ART-131
Corequisites:
This course introduces rendering the human figure with various drawing materials. Emphasis is placed on the use of the visual elements, anatomy, and proportion in the representation of the draped and undraped figure. Upon completion, students should be able to demonstrate competence in drawing the human figure.

ART-140 Basic Painting 0 4 0 2
Prerequisites:
Corequisites:
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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

ART-171 **Computer Art I** 0 6 0 3
Prerequisites: Take 1 group; # Take ENG-080 RED-080; # Take DRE-097(S23642)
Corequisites:
This course introduces the use of the computer as a tool for solving visual problems. Emphasis is placed on fundamentals of computer literacy and design through bit-mapped image manipulation. Upon completion, students should be able to demonstrate an understanding of paint programs, printers, and scanners to capture, manipulate, and output images.

ART-222 **Wood Design I** 0 6 0 3
Prerequisites:
Corequisites:
This course introduces the historical and contemporary design concepts and their application to the construction of functional and sculptural wood forms. Emphasis is placed on the mastery of hand and power tools. Upon completion, students should be able to demonstrate appropriate use of tools to create unique designs.

ART-223 **Wood Design II** 0 6 0 3
Prerequisites: Take ART-222(S16221)
Corequisites:
This course provides a continuation of the skills and techniques used in ART 222. Emphasis is placed on woodcarving and other processes. Upon completion, students should be able to use original designs in the creation of functional and sculptural forms.

ART-231 **Printmaking I** 0 6 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-096(S23641)
Corequisites:
This course introduces printmaking: its history, development techniques, and processes. Emphasis is placed on basic applications with investigation into image source and development. Upon completion, students should be able to produce printed images utilizing a variety of methods.

ART-232 **Printmaking II** 0 6 0 3
Prerequisites: Take ART-231
Corequisites:
This course includes additional methods and printmaking processes. Emphasis is placed on the printed image as related to method, source, and concept. Upon completion, students should be able to produce expressive images utilizing both traditional and innovative methods.

ART-240 **Painting I** 0 6 0 3
Prerequisites: Take 1 group; #Take ENG-070(S16349) RED-070(S10648); # Take DRE-096(S23641)
Corequisites:
This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form.

ART-241 **Painting II** 0 6 0 3
Prerequisites: Take ART-240
Corequisites:
This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety.

ART-244 **Watercolor** 0 6 0 3
Prerequisites: Take 1 group; # Take ENG-080 RED-080; #Take DRE-096(S23641)
Corequisites:
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-245 **Metals I** 0 6 0 3
Prerequisites:
Corequisites:
This course introduces basic metal design in traditional and contemporary art forms using brass, copper, and silver. Emphasis is placed on designing and fabricating jewelry, small sculptures, and utilitarian objects. Upon completion, students should be able to design and produce small art objects.

ART-246 **Metals II** 0 6 0 3
Prerequisites: Take ART-245(S11515)
Corequisites:
This course provides a continuation of metal design utilizing basic methods of casting and other processes. Emphasis is placed on individualized design. Upon completion, students should be able to design and produce expressive forms.

ART-247 **Jewelry I** 0 6 0 3
Prerequisites:
Corequisites:
This course introduces a basic understanding of the design and production of jewelry. Emphasis is placed on concepts and techniques using metals and other materials. Upon completion, students should be able to demonstrate an ability to use appropriate methods to create unique jewelry.

ART-248 **Jewelry II** 0 6 0 3
Prerequisites: Take ART-247
Corequisites:
This course is a continuation of the skills learned in ART 247. Emphasis is placed on the creation of individual designs that utilize a variety of techniques such as casting, cloisonne, and plique-a-jour. Upon completion, students should be able to create jewelry which demonstrates originality.

ART-251 **Weaving I** 0 6 0 3
Prerequisites:
Corequisites:
This course provides a basic understanding of the design and production of constructed textiles. Emphasis is placed on traditional weaving techniques. Upon completion, students should be able to warp and dress the loom and use appropriate techniques for the creation of unique woven fabrics.

ART-252 **Weaving II** 0 6 0 3
Prerequisites: Take ART-251
Corequisites:
This course furthers an exploration of creative design as it relates to manipulated fiber construction. Emphasis is placed on traditional and experimental methods. Upon completion, students should be able to create fiber constructions that utilize appropriate techniques for individual expressive designs.

ART-261 **Photography I** 0 6 0 3
Prerequisites:
Corequisites:
This course introduces photographic equipment, theory, and processes. Emphasis is placed on camera operation, composition, darkroom technique, and creative expression. Upon completion, students should be able to successfully expose, develop, and print a well-conceived composition.

ART-262 **Photography II** 0 6 0 3
Prerequisites: Take ART-261(S11371)
Corequisites:
This course introduces the creative manipulation of alternative photographic materials and processes such as toning, hand coloring, infrared, and multiple exposure. Emphasis is placed on personal vision and modes of seeing. Upon completion, students should be able to create properly exposed images using a variety of photographic materials and processes.

ART-263 **Color Photography** 0 6 0 3
Prerequisites: Take ART-262(S11289)
Corequisites:
This course provides an introduction to the procedures and processes involved in color photography. Emphasis is placed on the study of light, filtration, exposure, and films along with the processing and printing of color negative materials. Upon completion, students should be able to demonstrate an understanding of color principles, theories, and processes by using them creatively in the production of color prints.

ART-264 **Digital Photography I** 1 4 0 3
Prerequisites:
Corequisites:
This course introduces digital photographic equipment, theory and processes. Emphasis is placed on camera operation, composition, computer photo manipulation and creative expression. Upon completion, students should be able to successfully expose, digitally manipulate, and print a well-conceived composition.

ART-265 **Digital Photography II** 1 4 0 3
Prerequisites: Take ART-264
Corequisites:
This course provides exploration of the concepts and processes of photo manipulation through complex composite images, special effects, color balancing and image/text integration. Emphasis is placed on creating a personal vision and style. Upon completion, students should be able to produce well-executed images using a variety of photographic and photo manipulative approaches.

ART-266 **Videography I** 0 6 0 3
Prerequisites:
Corequisites:
This course introduces various aspects of basic video production including concept development, scripting, camera operation, and post-production. Emphasis is placed on creative expression, camera handling, story boarding, and editing. Upon completion, students should be able to demonstrate a basic understanding of video camera operation and production techniques.

ART-267 **Videography II** 0 6 0 3
Prerequisites: Take ART-266(S11306)
Corequisites:
This course is designed to provide a framework for the production of a long-term video project. Emphasis is placed on realization of the unique creative vision. Upon completion, students should be able to produce a thematically coherent, edited video with sound and titling.

ART-271 **Computer Art II** 0 6 0 3
Prerequisites: Take ART-171(S10922)
Corequisites:
This course includes advanced computer imaging techniques. Emphasis is placed on creative applications of digital technology. Upon completion, students should be able to demonstrate command of computer systems and applications to express their personal vision.

ART-275 **Introduction to Commercial Art** 0 6 0 3
Prerequisites:
Corequisites:
This course introduces the materials and techniques used in creative layout design for publication. Emphasis is placed on design for advertising in a variety of techniques and media including computer graphics. Upon completion, students should be able to demonstrate competence in manual camera-ready layout design and computer graphics literacy.

ART-281 **Sculpture I** 0 6 0 3
Prerequisites: Take 1 group; # Take ENG-070(S16349) RED-070(S10648); # Take DRE-096(S23641)
Corequisites:
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: Take ART-281(S16229)
Corequisites:
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.

ART-283 Ceramics I 0 6 0 3
Prerequisites:
Corequisites:
This course provides an introduction to three-dimensional design principles using the medium of clay. Emphasis is placed on fundamentals of forming, surface design, glaze application, and firing. Upon completion, students should be able to demonstrate skills in slab and coil construction, simple wheel forms, glaze technique, and creative expression.

ART-284 Ceramics II 0 6 0 3
Prerequisites: Take ART-283
Corequisites:
This course covers advanced hand building and wheel techniques. Emphasis is placed on creative expression, surface design, sculptural quality, and glaze effect. Upon completion, students should be able to demonstrate a high level of technical competence in forming and glazing with a development of three-dimensional awareness.

ART-288 Studio 0 6 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673)
Corequisites:
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.

ART-289 Museum Study 2 2 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
This course introduces research methods in the museum setting. Emphasis is placed on the chronology, styles, periods, context, and meaning in art. Upon completion, students should be able to demonstrate the advantage of first-hand and on-site research.

ASTRONOMY (AST Prefix)

AST-111 Descriptive Astronomy 3 0 0 3
Prerequisites: Take 1 group; # Take MAT-161(S20916) DMA-010 DMA-020 DMA-030 DMA-040 DMA-050; # Take MAT-171(S23934) DMA-010 DMA-020 DMA-030 DMA-040 DMA-050
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: Take 1 group; # Take MAT-161(S20916) DMA-010 DMA-020 DMA-030 DMA-040 DMA-050; # Take MAT-171(S23934) DMA-010 DMA-020 DMA-030 DMA-040 DMA-050
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: Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050;
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: Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050
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.

AST-152 **General Astronomy II** 3 0 0 3
Prerequisites: Take 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: Take 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)

ATR-193 **Selected Topic in Automation & Robotics** 2 3 0 3
Prerequisites:
Corequisites:
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.

ATR-211 **Robot Programming** 2 3 0 3
Prerequisites: Take CIS-110(S21058) or CIS-111(S12478)
Corequisites:
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-214 **Advanced PLCs** 3 3 0 4
Prerequisites: Take ELC-128(S23522)
Corequisites:
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:
Corequisites:
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.

AUTOMOTIVE (AUT Prefix)

AUT-114 **Safety and Emissions** 1 2 0 2
Prerequisites: Take AUT-141(S21690) AUT-141A AUT-151(S21692) AUT-151A
Corequisites:
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:
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:
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 Diagnosis & Service** 1 3 0 2
Prerequisites:
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 Systems** 2 3 0 3
Prerequisites: Take 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:
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: Take 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:
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:
Corequisites:
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:
Corequisites:
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-161B Basic Auto Electricity Part 2 1 3 0 2
Prerequisites: Take 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.

AUT-163 Advanced Automotive Electricity 2 3 0 3
Prerequisites: Take TRN-120
Corequisites:
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 **Advanced Automotive Electricity Lab** 0 3 0 1
Prerequisites:
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 **Automotive Climate Control** 2 4 0 4
Prerequisites: Take 1 group; # Take AUT-161A AUT-161B; # Take AUT-161(S21697)
Corequisites:
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: Take AUT-161A
Corequisites: AUT-161B, AUT-163
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 Peformance 2** 2 6 0 4
Prerequisites: Take AUT-141(S21690) AUT-141A AUT-151(S21692) AUT-151A AUT-281(S21713) AUT-181(S21701);
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: Take AUT-116(S21687) 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 **Automatic Transmissions/Transaxles** 2 3 0 3
Prerequisites: Take AUT-141(S21690) AUT-141A AUT-151(S21692) 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 **Automatic Transmissions/Transaxles Lab** 0 3 0 1
Prerequisites:
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 Manual Transmissions/Transaxles/Drive Trains 2 3 0 3
Prerequisites:
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 servicing and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair manual drive trains.

AUT-231A Manual Transmissions/Transaxles/Drive Trains Lab 0 3 0 1
Prerequisites:
Corequisites: AUT-231
This course is an optional lab for the program that needs to meet NATEF hour standards but does not have a co-op component in the program. Topics include manual drive train diagnosis, service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to diagnose and repair manual drive trains.

AUT-281 Advanced Engine Performance 2 2 0 3
Prerequisites: Take AUT-161A AUT-161B AUT-163(S21698) AUT-163A AUT-181(S21701)
Corequisites:
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.

BUSINESS ANALYTICS (BAS Prefix)

BAS-120 Business Analytics I 3 0 0 3
Prerequisites: Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050; # Take DRE-098(S23643)
Corequisites:
This course introduces basic concepts of business analytics. Topics include an overview of data and text mining, forecasting and optimization techniques, data visualization, data security, and ethics. Upon completion, students should be able to demonstrate a basic understanding of analytics for decision-making in business.

BAS-121 Analytics Methods I 3 0 0 3
Prerequisites: Take BAS-120
Corequisites:
This course introduces basic methods in business analytics. Topics include exploratory data analysis, regression, linear programming, and statistical methods for process improvement. Upon completion, students should be able to demonstrate an understanding of problem-solving techniques for business decision-making.

BAS-150 Analytics Tools I 2 2 0 3
Prerequisites: Take BAS-121(S23216)
Corequisites:
This course introduces basic statistical and analytic tools for use in business decision-making. Topics include utilization of business analytics and\or statistical software packages. Upon completion, students should be able to use computer software packages to solve basic business analytical problems.

BAS-220 Business Analytics II 3 0 0 3
Prerequisites: Take BAS-120
Corequisites:
This course provides an in-depth exploration of business analytics. Topics include application of analytic methods to finance, marketing, web, geospatial data, logistics, information systems, and statistical analysis of databases. Upon

completion, students should be able to demonstrate competence in analytics and be proficient at using software to aid in business decisions.

BAS-221 Analytics Methods II 3 0 0 3
Prerequisites: Take BAS-150
Corequisites:
This course introduces advanced statistical methods in business analytics and its applications. Topics include exploratory data analysis, linear regression, linear programming, and statistical methods for process improvement. Upon completion, students should be able to apply statistical problem-solving to business decision-making.

BAS-230 Business Analytics III 2 2 0 3
Prerequisites: Take BAS-220(S23219)
Corequisites:
This course covers advanced concepts in business analytics. Topics include analytics and pertinent applications to project management, theory, advanced modeling, legal issues and responsibility, technical writing, and problem-solving skills. Upon completion, students should be able utilize their knowledge and skills in business analytics to independently guide decision makers.

BAS-250 Analytics Tools II 2 2 0 3
Prerequisites: Take BAS-150
Corequisites:
This course introduces advanced statistical and analytic tools for use in business decision-making. Topics include utilization of computer software packages for business decision-making. Upon completion, students should be able to use analytic tools to solve business-related problems.

BAS-270 Analytics Practicum 2 3 0 3
Prerequisites: Take BAS-220(S23219)
Corequisites:
This course is designed to use a case study method to simulate a comprehensive application of business analytics. Emphasis is placed on relevant data collection, evaluation, presentation skills, analysis, teamwork, and conflict resolution skills. Upon completion, students should be able to demonstrate their ability to apply business analytic methods and best practices in a simulated business setting.

BIOLOGY (BIO Prefix)

BIO-094 Concepts of Human Biology 3 2 0 4
Prerequisites:
Corequisites: ENG-095, 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 Intro to Anatomy/Physiology/Microbiology 2 2 0 3
Prerequisites:
Corequisites:
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: Take 1 group; #Take MAT-070 ENG-090 RED-090; # Take MAT-070 ENG-111(S13673); # Take DMA-040 ENG-090 RED-090; #Take DMA-040 ENG-111(S13673); # Take MAT-070 DRE-098(S23643); # Take DMA-040 DRE-098(S23643)
Corequisites:
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.

BIO-111 **General Biology I** 3 3 0 4
Prerequisites: Take 1 group; # Take ENG-090 MAT-070 RED-090; # Take ENG-111(S13673) MAT-070; #Take ENG-090 DMA-050 RED-090; #Take ENG-111(S13673) DMA-050; # Take MAT-070 DRE-098(S23643); #Take DMA-040 DRE-098(S23643)
Corequisites:
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.

BIO-112 **General Biology II** 3 3 0 4
Prerequisites: Take BIO-111(S24020); Minimum grade C;
Corequisites:
This course is a continuation of BIO 111. Emphasis is placed on organisms, evolution, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels.

BIO-120 **Introductory Botany** 3 3 0 4
Prerequisites: Take BIO-110(S13284) or BIO-111(S13307)
Corequisites:
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.

BIO-130 **Introductory Zoology** 3 3 0 4
Prerequisites: Take BIO-110(S13284) or BIO-111(S13307)
Corequisites:
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.

BIO-140 **Environmental Biology** 3 0 0 3
Prerequisites: Take BIO-110(S13284) or BIO-111(S13307); Minimum grade C
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 interrelationships and of contemporary environmental issues.

BIO-140A **Environmental Biology Lab** 0 3 0 1
Prerequisites: Take BIO-110(S13284) or BIO-111(S13307); Minimum grade C
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.

BIO-145 **Ecology** 3 3 0 4
Prerequisites: Take BIO-110(S13284) or BIO-111(S13307)
Corequisites:
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.

BIO-150 Genetics in Human Affairs 3 0 0 3
Prerequisites: Take BIO-110(S13284) or BIO-111(S13307)
Corequisites:
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.

BIO-155 Nutrition 3 0 0 3
Prerequisites: Take CHM-090 CHM-130 CHM-131 CHM-151 CHM-152 CHM-251 or CHM-092
Corequisites:
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 wellas 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-161 Introduction to Human Biology 3 0 0 3
Prerequisites:
Corequisites:
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 & Physiology 4 2 0 5
Prerequisites: Take CHM-090 CHM-130 CHM-131 CHM-151 CHM-152 or CHM-251
Corequisites:
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: Take CHM-090
Corequisites:
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: Take BIO-165
Corequisites:
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 1 group; # Take ENG-090 RED-090 CHM-090; # Take ENG-090 RED-090 CHM-092; #Take ENG-090 RED-090 CHM-130; # Take ENG-090 RED-090 CHM-151; # Take ENG-090 RED-090 CHM-152; #Take ENG-090 RED-090 CHM-251;

Corequisites:
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.

BIO-169 **Anatomy and Physiology II** 3 3 0 4
Prerequisites: Take BIO-168(S11555); Minimum grade C
Corequisites:
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

BIO-175 General Microbiology 2 2 0 3
Prerequisites: Take BIO-110(S13284) BIO-111(S13307) BIO-163 BIO-165 or BIO-168(S11555)
Corequisites:
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.

BIO-230 Entomology 3 3 0 4
Prerequisites: Take BIO-112(S13261)
Corequisites:
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: Take BIO-112(S13261)
Corequisites:
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.

BIO-232 Vertebrate Zoology 3 3 0 4
Prerequisites: Take BIO-112(S13261)
Corequisites:
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.

BIO-242 Natural Resource Conservation 3 0 0 3
Prerequisites: Take 1 group; # Take BIO-112(S13261); # Take BIO-140 BIO-140A
Corequisites:
This course covers 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.

BIO-243 Marine Biology 3 3 0 4
Prerequisites: Take BIO-110(S13284) or BIO-111(S13307)
Corequisites:
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: Take BIO-112(S13261)
Corequisites:
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: Take BIO-163 BIO-166 or BIO-169(S16244)
Corequisites:
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: Minimum grade C;Take 1 group; #Take BIO-110(S13284); #Take BIO-111(S13307); # Take BIO-163; #Take BIO-165; # Take BIO-168(S11555);
Corequisites:
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.

BAKING AND PASTRY ARTS (BPA Prefix)

BPA-120 **Petit Fours and Pastries** 1 4 0 3
Prerequisites: Take CUL-110(S11030) CUL-160(S13015);Take CUL-110(S22835) CUL-160(S22847) BPA-210(S22830) BPA-165(S22829)
Corequisites:
This course introduces the basic principles of the preparation and plating of a variety 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: Take CUL-110(S22835) CUL-160(S22847) BPA-210(S22830) BPA-165(S22829); Take CUL-110(S11030) CUL-160(S13015)
Corequisites:
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: Take CUL-110(S22835) CUL-160(S22847) CUL-140(S22844); Take CUL-110(S11030) CUL-160(S13015)
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-165 **Hot and Cold Desserts** 1 4 0 3
Prerequisites: Take CUL-110(S11030) CUL-160(S13015)
Corequisites:
This course covers the principles and techniques of frozen desserts, soufflés, cobblers, crisps, and strudel dough products. Topics include bombes, parfaits, baked Alaska, ice cream, sorbets, sherbets and granites; hand-stretched strudel products, crepes, and hot/cold soufflés. Upon completion, student should be able to prepare and plate hot and cold desserts with suitable sauces and garnishes.

BPA-210 Cake Design and Decorating 1 4 0 3
Prerequisites: Take CUL-110(S22835) CUL-160(S22847) CUL-140(S22844); Take CUL-110(S11030) CUL-160(S13015)
Corequisites:
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: Take CUL-110(S22835) CUL-160(S22847) BPA-150 BPA-210(S22830) BPA-165(S22829); Take CUL-110(S11030) CUL-160(S13015)
Corequisites:
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: Take CUL-110(S11030) CUL-160(S13015)
Corequisites:
This course provides a study in the art and craft of chocolate. Topics include chocolate tempering, piping, and 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 evaluate tempered chocolate and produce a variety of chocolate candies and decorative elements for garnishing desserts.

BPA-230A Chocolate Artistry Lab 0 2 0 1
Prerequisites: Take CUL-110(S22835) CUL-160(S22847); Take CUL-110(S11030) CUL-160(S13015)
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: Take CUL-110(S22835) CUL-160(S22847) BPA-130(S22828); Take CUL-110(S11030) CUL-160(S13015)
Corequisites:
This course provides a study in the elements and principles of design as they relate to plated desserts. Topics include plate composition, portioning, flavor pairings, textures, temperatures, eye appeal, balance, color harmony and plate decorating/painting techniques such as stenciling and chocolate striping. Upon completion, students should be able to demonstrate competence in combining a variety of dessert components enhanced with plate decorating techniques.

BPA-250 Dessert and Bread Production 1 8 0 5
Prerequisites: Take BPA-150
Corequisites:
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 and Baking Marketing 2 2 0 3
Prerequisites: Take BPA-150 BPA-210(S22830)
Corequisites: BPA-250, BPA-220, BPA-230
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.

BIOPROCESSING MANUFACTURING TECH (BPM Prefix)

BPM-110 Bioprocess Practices 3 4 0 5
Prerequisites:
Corequisites:
This course provides a study of plant operations including various plant utility systems and detailed study of the varied plant environments in a bioprocessing facility. Emphasis is placed on quality mindset and principles of validation through applications of monitoring procedures. Upon completion, students should be able to demonstrate the rigors of industry regulation and its necessity.

BLUEPRINT READING (BPR Prefix)

BPR-111 Print Reading 1 2 0 2
Prerequisites:
Corequisites:
This course introduces the basic principles of print reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic prints and visualize the features of a part or system.

BPR-111 Blueprint Reading 1 2 0 2
Prerequisites:
Corequisites:
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 Print Reading-Construction 3 0 0 3
Prerequisites:
Corequisites:
This course covers the interpretation of prints and specifications that are associated with design and construction projects. Topics include interpretation of documents for foundations, floor plans, elevations, and related topics. Upon completion, students should be able to read and interpret construction prints and documents.

BPR-130 Blueprint Reading-Construction 1 2 0 2
Prerequisites:
Corequisites:
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: Take BPR-130(S11505)
Corequisites:
This course covers blueprints specific to commercial structures and requires basic blueprint reading skills and/or a commercial construction background. Topics include site, structural, mechanical, electrical, and plumbing blueprints and specifications. Upon completion, students should be able to interpret commercial blueprints and specifications.

BUSINESS (BUS Prefix)

BUS-110 Introduction to Business 3 0 0 3
Prerequisites:
Corequisites:
This course provides a survey of the business world. Topics include the basic principles and practices of contemporary

business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects.

BUS-115 Business Law I 3 0 0 3
Prerequisites:
Corequisites:
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: Take BUS-115(S11427)
Corequisites:
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:
Corequisites:
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.

BUS-125 Personal Finance 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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 I 3 0 0 3
Prerequisites:
Corequisites:
This course provides an introduction to the principles of entrepreneurship. Topics include self-analysis of entepreneurship readiness, the role of entrepreneur in economic development, legal problems, organizational structure, sources of financing, budgeting, and cash flow. Upon completion, students should have an understanding of the entrepreneurial process and issues faced by entrepreneurs.

BUS-148 Survey of Real Estate 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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-210 Investment Analysis 3 0 0 3
Prerequisites: Take ACC-111 or ACC-120(S10290)
Corequisites:
This course examines the concepts related to financial investment and the fundamentals of managing investments. Emphasis is placed on the securities markets, stocks, bond, and mutual funds, as well as tax implications of investment alternatives. Upon completion, students should be able to analyze and interpret investment alternatives and report findings to users of financial information.

BUS-217 Employment Law and Regulations 3 0 0 3
Prerequisites:
Corequisites:
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: Take ACC-120(S10290)
Corequisites:
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:
Corequisites:
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-234 Training and Development 3 0 0 3
Prerequisites:
Corequisites:
This course covers developing, conducting, and evaluating employee training with attention to adult learning principles. Emphasis is placed on conducting a needs assessment, using various instructional approaches, designing the learning environment, and locating learning resources. Upon completion, students should be able to design, conduct, and evaluate a training program.

BUS-245 Entrepreneurship II 3 0 0 3
Prerequisites: Take BUS-139(S21145)
Corequisites:
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 Recruiting,Selection&Personnel Planning 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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: Take BUS-217(S12902) BUS-234(S11966) BUS-256(S13286) BUS-258(S13263)
Corequisites:
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.

BUS-260 Business Communication 3 0 0 3
Prerequisites: Take ENG-110(S22173) or ENG-111(S13673)
Corequisites:
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-260 Business Communication 3 0 0 3
Prerequisites: Take ENG-111(S13673)
Corequisites:
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:
Corequisites:
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)

CAT-210 CT Physics & Equipment 3 0 0 3
Prerequisites:
Corequisites:
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:
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-224 CT Clinical Practicum 0 0 12 4
Prerequisites:
Corequisites:
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-226 CT Clinical Practicum 0 0 18 6
Prerequisites:
Corequisites:
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:
Corequisites:
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)

CCT-121 Computer Crime Investigation 3 2 0 4
Prerequisites: Take 1 group; # Take NET-110(S21056) NOS-110; # Take NET-125(S21095) NOS-110
Corequisites:
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: Take CCT-121 CTS-120(S20998)
Corequisites:
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.

CIVIL ENGINEERING AND GEOMATIC (CEG Prefix)

CEG-115 Intro to Tech & Sustainability 2 3 0 3
Prerequisites:
Corequisites:
This course introduces basic skills, sustainability concepts and career fields for technicians. Topics include career options, technical vocabulary, dimensional analysis, measurement systems, engineering graphics, professional ethics, and related topics. Upon completion, students should be able to identify drawing elements and create sketches, perform basic engineering computations and identify measures of sustainable development.

CEG-151 Cad for Engineering Technology 2 3 0 3
Prerequisites:
Corequisites:
This course introduces computer-aided drafting (CAD) software. Topics include file and data management, drawing, editing, dimensioning commands, plotting, and related topics. Upon completion, students should be able to create and plot basic drawings and maps using CAD software.

CEG-210 Construction Materials & Methods 2 3 0 3
Prerequisites: Take 1 group; # Take CEG-115 CEG-151; # Take CEG-115 DFT-151; # Take EGR-115(S20666) CEG-151; #Take EGR-115(S20666) DFT-151
Corequisites:
This course covers the behavior and properties of Portland cement, asphaltic concretes, and other construction materials, including construction methods and equipment. Topics include cementing agents, aggregates, water and admixture materials with their proportions, production, placement, consolidation, curing; and their inspection. Upon completion, students should be able to proportion Portland concrete mixes to attain predetermined strengths, perform standard control tests on Portland cement concrete, identify inspection criteria for concretes, identify construction equipment and applications.

CEG-211 Hydrology & Erosion Control 2 3 0 3
Prerequisites: Take 1 group; #Take MAT-080; # Take MAT-120(S20803); #Take MAT-120(S20803); # Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171(S20807); # Take DMA-060(S23172) DMA-070(S23173) DMA-080(S23174)
Corequisites:
This course introduces basic engineering principles and characteristics of hydrology, erosion and sediment control. Topics include stormwater runoff, gravity pipe flow, open channel flow, low impact development (LID), erosion control devices and practices. Upon completion, students should be able to analyze and design gravitational drainage structures, identify LID and erosion control elements, and prepare a stormwater drainage plan.

CEG-211 Hydrology & Erosion Control 2 3 0 3
Prerequisites: Take 1 group; #Take MAT-121(S23927) CEG-115 CIV-125(S21521); # Take MAT-121(S23927) EGR-115(S20666) CIV-125(S21521); #Take MAT-171(S23934) CEG-115 CIV-125(S21521); #Take MAT-171(S23934) EGR-115(S20666) CIV-125(S21521);
Corequisites:
This course introduces basic engineering principles and characteristics of hydrology, erosion and sediment control. Topics include stormwater runoff, gravity pipe flow, open channel flow, low impact development (LID), erosion control devices and practices. Upon completion, students should be able to analyze and design gravitational drainage structures, identify LID and erosion control elements, and prepare a stormwater drainage plan.

CEG-212 Introduction to Environmental Technology 2 3 0 3
Prerequisites: Take 1 group; # Take EGR-250(S23987) CEG-115 CIV-125(S21521); #Take EGR-250(S23987) EGR-115(S20666) CIV-125(S21521); #Take EGR-251 CEG-115 CIV-125(S21521); # Take EGR-251 EGR-115(S20666) CIV-125(S21521); #Take EGR-250(S23538) EGR-251 or MEC-210(S20669);
Corequisites:
This course introduces basic engineering principles of hydraulics, and water and wastewater technologies. Topics include fluid statics, fluid dynamics, flow measurement, the collection, treatment, and distribution of water and wastewater. Upon completion, students should be able to identify water and wastewater system elements, describe water and wastewater system processes and perform basic hydraulics and treatment computations.

CEG-230 Subdivision Planning & Design 1 6 0 3
Prerequisites: Take 1 group; # Take CEG-151 CEG-211(S23951) CIV-125(S21521) SRV-111; # Take DFT-151 CEG-211(S23951) CIV-125(S21521) SRV-111; #Take EGR-120(S20678) CEG-211(S23951) CIV-125(S21521) SRV-111; # Take CEG-211(S23951) CIV-125(S21521)
Corequisites:
This course covers the planning and design concepts related to subdivisions including analysis of development standards, engineering, and the creation of CAD drawings. Topics include applicable codes, lot creation, roadway system layout, stormwater drainage, low impact development (LID) concepts, and related topics. Upon completion, students should be able to prepare a set of subdivision plans.

CEG-235 Project Management and Estimating 2 3 0 3
Prerequisites: # Take CIS-111(S21059) CIS-110(S21058) or EGR-125; # Take EGR-115(S20666) or CEG-115;
Corequisites:
This course covers planning and estimating practices which are applicable to the civil engineering and related construction industries. Emphasis is placed on construction project planning and management, material take-offs labor and equipment requirements in accordance with industry formats, and other economic topics. Upon completion, students should be able to accurately complete material take-offs, prepare cost estimates, and prepare construction schedules.

CEG-235 Project Management and Estimating 2 3 0 3
Prerequisites: Take CIS-110(S21058) CIS-111(S21059) CEG-115 EGR-115(S20666) or EGR-125
Corequisites:
This course covers planning and estimating practices which are applicable to the civil engineering and related construction industries. Emphasis is placed on construction project planning and management, material take-offs labor and equipment requirements in accordance with industry formats, and other economic topics. Upon completion, students should be able to accurately complete material take-offs, prepare cost estimates, and prepare construction schedules.

COMPUTER ENGINEERING TECHNOLOGY (CET Prefix)

CET-110 Introduction to CET 0 3 0 1
Prerequisites:
Corequisites:
This course introduces the basic skills required for computer technicians. Topics include career choices, safety practices, technical problem solving, scientific calculator usage, soldering/desoldering, keyboarding skills, engineering computer applications, and other related topics. Upon completion, students should be able to safely solder/desolder and use a scientific calculator and computer applications to solve technical problems.

CET-111 Computer Upgrade/Repair I 2 3 0 3
Prerequisites:
Corequisites:
This course covers repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics include CPU/memory/bus identification, disk subsystems, hardware/software installation/configuration, common device drivers, data recovery, system maintenance, and other related topics. Upon completion, students should be able to safely repair and/or upgrade computer systems to perform within specifications.

CET-193A **Selected Topics in Labview** 2 3 0 3
Prerequisites:
Corequisites:
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.

CET-222 **Computer Architecture** 2 0 0 2
Prerequisites:
Corequisites:
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-242 **High Performance Computing** 2 3 0 3
Prerequisites: Take CTI-240
Corequisites:
This course covers advanced concepts associated with high performance computing and network technologies. Topics include render farms, clusters, parallelism and grid services. Upon completion, the student should be able to install, manage, and troubleshoot a network cluster and a grid.

CET-251 **Software Engineering Principles** 3 3 0 4
Prerequisites:
Corequisites:
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.

CHINESE (CHI Prefix)

CHI-111 **Elementary Chinese I** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites: CHI-181
This course introduces the fundamental elements of the Chinese language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Chinese and demonstrate cultural awareness.

CHI-112 **Elementary Chinese II** 3 0 0 3
Prerequisites: Take CHI-111
Corequisites: CHI-182
This course includes the basic fundamentals of the Chinese language within a cultural context of the Chinese people and its history. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Chinese and demonstrate further cultural awareness.

CHI-181 **Chinese Lab I** 0 2 0 1
Prerequisites: Take 1 group; # Take ENG-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites: CHI-111
This course provides an opportunity to enhance acquisition of the fundamental elements of the Chinese language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Chinese and demonstrate cultural awareness.

CHI-182 **Chinese Lab II** 0 2 0 1
Prerequisites: Take CHI-181
Corequisites: CHI-112
This course provides an opportunity to enhance acquisition of the fundamental elements of the Chinese language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Chinese and demonstrate cultural awareness.

CHI-211 **Intermediate Chinese I** 3 0 0 3
Prerequisites: Take CHI-112
Corequisites:
This course includes communicative competencies in speaking, listening comprehension, reading, and writing at an intermediate level with attention to cultural awareness. Emphasis is placed on intermediate skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should demonstrate simple conversations and distinguish an appropriate range of Chinese characters, as well as read simple expressions in modern standard Chinese.

CHI-212 **Intermediate Chinese II** 3 0 0 3
Prerequisites: Take CHI-211
Corequisites:
This course provides continuation of communicative competence in speaking, listening comprehension, reading and writing at an intermediate level with attention to cultural awareness. Emphasis is placed on intermediate skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should demonstrate simple conversations and distinguish a broad range of Chinese characters, as well as read expressions in modern standard Chinese.

CHEMISTRY (CHM Prefix)

CHM-090 **Chemistry Concepts** 4 0 0 4
Prerequisites: Take 1 group; # Take ENG-090 MAT-070 RED-090; # Take MAT-070 ENG-111(S13673); # Take ENG-090 DMA-040 RED-090; #Take DMA-040 ENG-111(S13673);
Corequisites:
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: Take 1 group; # Take ENG-090 MAT-070 RED-090; # Take ENG-111(S13673) MAT-070; # Take ENG-090 DMA-040 RED-090; #Take ENG-111(S13673) DMA-040
Corequisites:
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, & Biochemistry** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 MAT-070 RED-090; # Take ENG-111(S13673) MAT-070; # Take ENG-090 DMA-040 RED-090; # Take ENG-111(S13673) DMA-040
Corequisites:
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-130A **General, Organic, & Biochemistry Lab** 0 2 0 1
Prerequisites:
Corequisites: CHM-130
This course is a laboratory for CHM 130. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 130. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 130.

CHM-131 **Introduction to Chemistry** 3 0 0 3
Prerequisites:
Corequisites:
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.

CHM-131A **Introduction to Chemistry Lab** 0 3 0 1
Prerequisites:
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.

CHM-132 **Organic and Biochemistry** 3 3 0 4
Prerequisites: Take 1 group; # Take CHM-131 CHM-131A; # Take CHM-151
Corequisites:
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: Take 1 group; # Take CHM-090 RED-090 ENG-090 MAT-161(S20916); Minimum grade C; # Take CHM-092 RED-090 ENG-090 MAT-161(S20916); Minimum grade C; # Take CHM-090 ENG-111(S13673) MAT-161(S20916); Minimum grade C;
Corequisites:
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.

CHM-152 **General Chemistry II** 3 3 0 4
Prerequisites: Take CHM-151; Minimum grade C
Corequisites:
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.

CHM-251 **Organic Chemistry I** 3 3 0 4
Prerequisites: Take CHM-152; Minimum grade C
Corequisites:
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.

CHM-252 **Organic Chemistry II** 3 3 0 4
Prerequisites: Take CHM-251; Minimum grade C;
Corequisites:
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.

CHM-261 **Quantitative Analysis** 2 6 0 4
Prerequisites: Take CHM-152
Corequisites:
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 complexometric methods. Upon completion, students should be able to perform classical quantitative analytical procedures.

INFORMATION SYSTEMS (CIS Prefix)

CIS-110 **Introduction to Computers** 2 2 0 3
Prerequisites:
Corequisites:
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.

CIS-111 **Basic PC Literacy** 1 2 0 2
Prerequisites:
Corequisites:
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.

CIS-115 **Intro to Programming & Logic** 2 3 0 3
Prerequisites: Take 1 group; # Take MAT-060 MAT-070 RED-090; # Take MAT-060 MAT-080 RED-090; # Take MAT-060 MAT-090 RED-090; #Take MAT-095 RED-090; #Take MAT-120(S20803) RED-090; # Take MAT-121(S20804) RED-090; #Take MAT-161
Corequisites:
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.

CIS-115 **Intro to Programming & Logic** 2 3 0 3
Prerequisites: Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040; #Take MAT-121(S23927); # Take MAT-171(S23934)
Corequisites:
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.

CIS-155 **Database Theory/Analysis** 2 2 0 3
Prerequisites: Take DBA-110 or DBA-120
Corequisites:
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 which exhibit data integrity.

CIS-162 **MM Presentation Software** 2 2 0 3
Prerequisites: Take CIS-110(S12456) or CIS-111(S12478)
Corequisites:
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-166 **Desktop Publishing II** 2 2 0 3
Prerequisites: Take CIS-165
Corequisites:
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.

CIVIL ENGINEERING TECHNOLOGY (CIV Prefix)

CIV-110 **Statics/Strength of Mater** 2 6 0 4
Prerequisites: Take MAT-121(S20804) MAT-161(S20916) MAT-171(S20807) or MAT-175
Corequisites:
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 4 0 4
Prerequisites: Take 1 group; # Take EGR-250(S23538) CEG-115 CIV-125(S21521); # Take EGR-250(S23987) EGR-115(S20666) CIV-125(S21521); # Take EGR-251 CEG-115 CIV-125(S21521); # Take EGR-251 EGR-115(S20666) CIV-125(S21521); # Take MEC-210(S20669);
Corequisites:
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-111 **Soils and Foundations** 2 3 0 3
Prerequisites: Take CIV-110(S11294) or MEC-250(S13619)
Corequisites:
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: Take CEG-151 or DFT-151
Corequisites:
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-211 Hydraulics and Hydrology 2 3 0 3
Prerequisites: Take CIV-110(S11294) or MEC-250(S13619)
Corequisites:
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-215 Highway Technology 1 3 0 2
Prerequisites: Take 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-215 Highway Technology 2 3 0 3
Prerequisites: # Take CEG-115 or EGR-115(S20666); # Take MAT-121(S20804) MAT-161(S20916) or MAT-171(S20807)
Corequisites: CIV-211
This course introduces the essential elements of roadway components and design. Topics include subgrade and pavement construction, roadway drawings and details, traffic analysis, geometric design and other related topics. Upon completion, students should be able to interpret roadway details and specifications, and produce street and highway construction drawings.

CIV-215 Highway Technology 2 3 0 3
Prerequisites: Take 1 group; #Take CEG-115 MAT-121(S23927) CIV-125(S21521) SRV-111; #Take CEG-115 MAT-171(S20807) CIV-125(S21521) SRV-111; #Take EGR-115(S20666) MAT-121(S23927) CIV-125(S21521) SRV-111; # Take EGR-115(S20666) MAT-171(S20807)
Corequisites:
This course introduces the essential elements of roadway components and design. Topics include subgrade and pavement construction, roadway drawings and details, traffic analysis, geometric design and other related topics. Upon completion, students should be able to interpret roadway details and specifications, and produce street and highway construction drawings.

CIV-221 Steel and Timber Design 2 3 0 3
Prerequisites: Take EGR-250(S23538) EGR-251 or MEC-210(S20669)
Corequisites:
This course introduces the basic elements of steel and timber structures. Topics include strength of materials applications, the analysis and design of steel and timber beams, columns, and connections and concepts of structural detailing. Upon completion, students should be able to analyze, design, and draw simple plans using Computer Aided Drafting and Design software (CADD).

CIV-230 Construction Estimating 2 3 0 3
Prerequisites: Take CIS-111(S12478) EGR-115(S12560) CIS-110(S12456) or ARC-111
Corequisites:
This course covers quantity take-offs of labor, materials, and equipment and calculation of direct and overhead costs for a construction project. Topics include the interpretation of working drawings and specifications, types of contracts and estimates, building codes, bidding techniques and procedures, and estimating software. Upon completion, students should be able to prepare a detailed cost estimate and bid documents for a construction project.

CIV-240 Project Management 2 3 0 3
Prerequisites:
Corequisites:
This course introduces construction planning and scheduling techniques and project management software. Topics include construction safety, operation analysis, construction scheduling, construction control systems, claims and dispute resolutions, project records and documentation. Upon completion, students should be able to demonstrate an

understanding of the roles of construction project participants, maintain construction records, and prepare construction schedules.

CIV-250 Civil Engineering Technology Project 1 3 0 2
Prerequisites: Take CIV-111(S11393) CIV-125(S21521) or CIV-211
Corequisites:
This course includes an integrated team approach to civil engineering technology projects. Emphasis is placed on project proposal, site selection, analysis/design of structures, construction material selection, time and cost estimating, planning, and management of a project. Upon completion, students should be able to apply team concepts, prepare estimates, submit bid proposals, and manage projects.

CRIMINAL JUSTICE (CJC Prefix)

CJC-111 Introduction to Criminal Justice 3 0 0 3
Prerequisites:
Corequisites:
This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options.

CJC-112 Criminology 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
This course covers the operation of digital photographic equipment and its application to criminal justice. Topics include the use of digital cameras, storage of digital images, the retrieval of digital images and preparation of digital images as evidence. Upon completion, students should be able to demonstrate and explain the role and use of digital photography, image storage and retrieval in criminal investigations.

CJC-120 Interviews/Interrogations 1 2 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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 & Evidence 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
This course covers the history, major philosophies, components, and current pracices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system.

CJC-144 Crime Scene Processing 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the theories and practices of crime scene processing and investigating. Topics include legal considerations at the crime scene, processing indoor and outdoor scenes, recording, note taking, collection and preservation of evidence and submission to the crime laboratory. Upon completion, the student should be able to evaluate and search various crime scenes and demonstrate theapprpriate techniques.

CJC-145 Crime Scene CAD 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the student to CAD software for crime scenes. Topics include drawing, editing, file management and drafting theory and practices. Upon completion, the students should be able to produce and plot a crime scene drawing.

CJC-146 Trace Evidence 2 3 0 3
Prerequisites:
Corequisites:
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.

CJC-151 Introduction to Loss Prevention 3 0 0 3
Prerequisites:
Corequisites:
This course introduces the concepts and methods related to commercial and private security systems. Topics include the historical, philosophical, and legal basis of security, with emphasis on security surveys, risk analysis, and associated functions. Upon completion, students should be able to demonstrate and understand security systems, risk management, and the laws relative to loss prevention.

CJC-160 Terrorism: Underlying Issues 3 0 0 3
Prerequisites:
Corequisites:
This course identifies the fundamental reasons why America is a target for terrorists, covering various domestic/international terrorist groups and ideologies from a historical aspect. Emphasis is placed upon recognition of terrorist crime scene; weapons of mass destruction; chemical, biological, and nuclear terrorism; and planning considerations involving threat assessments. Upon completion, students should be able to identify and discuss the methods used in terrorists' activities and complete a threat assessment for terrorists' incidents.

CJC-161 Introduction to Homeland Security 3 0 0 3
Prerequisites:
Corequisites:
This course introduces the historical, organizational and practical aspects of Homeland Security. Topics include a historic overview, definitions and concepts, organizational structure, communications, technology, mitigation, prevention and preparedness, response and recovery, and the future of Homeland Security. Upon completion, students should be able to explain essential characteristics of terrorism and Homeland Security, and define roles, functions and interdependency between agencies.

CJC-162 Intelligence Analysis and Security Management 3 0 0 3
Prerequisites:
Corequisites:
This course examines intelligence analysis and its relationship to the security management of terrorist attacks and other threats to national security of the United States. Topics include a historic overview, definitions and concepts, intelligence evolution-politicization-operations-strategies, surveillance, analysis perspectives, covert action, and ethics. Upon completion, students should be able to outline intelligence policies, evaluate source information, implement intelligence techniques and analysis, identify threats, and apply ethical behaviors.

CJC-163 Transportation and Border Security 3 0 0 3
Prerequisites:
Corequisites:
This course provides an in-depth view of modern border and transportation security including the technologies used for detecting potential threats from terrorists and weapons. Topics include an overview of security challenges, detection devices and equipment, transportation systems, facilities, threats and counter-measures, and security procedures, policies and agencies. Upon completion, students should be able to describe border security, the technologies used to enforce it, and the considerations and strategies of border security agencies.

CJC-212 Ethics & Community Relations 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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 & Administration 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
This course introduces the basic elements of fingerprint technology and techniques applicable to the criminal justice field. Topics include the history and meaning of fingerprints, pattern types and classification filing sequence, searching and referencing. Upon completion, the students should be able to discuss and demonstrate the fundamental techniques of basic fingerprint technology.

CJC-246 Advanced Friction Ridge Analysis 2 3 0 3
Prerequisites: Take CJC-245
Corequisites:
This course introduces the theories and processes of advanced friction ridge analysis. Topics include evaluation of friction ridges, chart preparation, comparative analysis for values determination rendering proper identification, chemical enhancement and AFIS preparation and usage. Upon completion, students must show an understanding of proper procedures for friction ridge analysis through written testing and practical exercises.

CJC-260 Threat Assessment 1 2 0 2
Prerequisites:
Corequisites:
This course prepares students to perform extensive security audits for private corporations and for local and state government, identifying weaknesses in their overall security programs. Emphasis will be placed on risk analysis studies that examine the methods, procedures, and systems for security gaps and vulnerabilities. Upon completion, students should be able to evaluate all facets of a protective program from corporate disaster response planning to security teams guarding local/state officials.

CJC-262 High-Risk Event Planning 1 2 0 2
Prerequisites:
Corequisites:
This course introduces students to the principles of high-risk executive protection and the planning associated with security during visits from government officials and other dignitaries. Emphasis will be placed on conducting advance surveys, residential security, restaurant and banquet security, surveillance detection, and counter surveillance operations. Upon completion, students should be able to demonstrate the ability to write security plans for high-risk events.

CONSTRUCTION MANAGEMENT (CMT Prefix)

CMT-112 Construction Mgt I 4 4 0 6
Prerequisites:
Corequisites:
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:
Corequisites:
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: Take CMT-112A
Corequisites:
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:
Corequisites:
This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (ADA) building codes. Upon completion, students should understand the building code inspections process and apply building code principals and requirements to construction projects.

CMT-120 Codes and Inspections 3 0 0 3
Prerequisites:
Corequisites:
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-193A Selected Topics in Construction Mgmt 3 0 0 3
Prerequisites:
Corequisites:
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.

CMT-210 Construction Management Fundamentals 3 0 0 3
Prerequisites:
Corequisites:
This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contracts, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, students should be able to demonstrate the basic skills necessary to be successful as a supervisor in the construction industry.

CMT-210 Professional Construction Supervision 3 0 0 3
Prerequisites:
Corequisites:
This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contracts, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, 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:
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, the student should be able to properly supervise safety at a construction jobsite and qualify for OSHA Training Certification.

CMT-214 Planning and Scheduling 3 0 0 3
Prerequisites: Take CMT-210(S13450) BPR-130(S11505)
Corequisites:
This course covers the need for and the process of planning construction projects, as well as the mechanics and vocabulary of project scheduling. Topics include project preplanning, scheduling formats, planning for production, short interval planning, schedule updating and revising, and computer-based planning and scheduling. Upon completion, the student should be able to understand the need for planning and scheduling, the language and logic of scheduling, and use of planning skills.

CMT-216 Costs and Productivity 3 0 0 3
Prerequisites: Take CMT-210(S13450)
Corequisites:
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: Take CMT-210(S13450)
Corequisites:
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:
Corequisites:
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)

COE-111 Co-Op Work Experience I 0 0 0 1
Prerequisites:
Corequisites:
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 0 2
Prerequisites:
Corequisites:
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 0 3
Prerequisites:
Corequisites:
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 0 4
Prerequisites:
Corequisites:
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:
Corequisites:
This course description may be written by the individual colleges.

COE-121 Co-Op Work Experience II 0 0 0 1
Prerequisites:
Corequisites:
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 0 2
Prerequisites:
Corequisites:
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 II 0 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
This course description may be written by the individual colleges.

COE-131 Co-Op Work Experience III 0 0 0 1
Prerequisites:
Corequisites:
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-132 Co-Op Work Experience III 0 0 0 2
Prerequisites:
Corequisites:
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-133 Co-Op Work Experience III 0 0 0 3
Prerequisites:
Corequisites:
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 0 1
Prerequisites:
Corequisites:
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-212 Co-Op Work Experience IV 0 0 0 2
Prerequisites:
Corequisites:
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)

COM-110 Introduction to Communication 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-080 RED-080; # Take DRE-097(S23642)
Corequisites:
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: Take 1 group; # Take ENG-080 RED-080; # Take DRE-097(S23642)
Corequisites:
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 Intro to Interpersonal Communication 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-080 RED-080; # Take DRE-097(S23642)
Corequisites:
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-140 Introduction to Intercultural Communication 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; # Take ENG-111(S13673); #Take DRE-097(S23642)
Corequisites:
This course introduces techniques of cultural research, definitions, functions, characteristics, and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one's primary culture.

COM-150 Introduction to Mass Communication 3 0 0 3
Prerequisites: Take ENG-111(S13673)
Corequisites:
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.

COM-231 Public Speaking 3 0 0 3
Prerequisites: Take ENG-111(S13673); Minimum grade C
Corequisites:
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: Take 1 group; # Take RED-090 ENG-090; # Take ENG-111(S13673)
Corequisites:
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.

COSMETOLOGY (COS Prefix)

COS-111 Cosmetology Concepts I 4 0 0 4
Prerequisites:
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:
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.

COS-111B Cosmetology Concepts I, Part 2 2 0 0 2
Prerequisites:
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.

COS-112 Salon I 0 24 0 8
Prerequisites:
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:
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.

COS-112B Salon I, Part 2 0 12 0 4
Prerequisites:
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.

COS-113 Cosmetology Concepts II 4 0 0 4
Prerequisites:
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:
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.

COS-113B **Cosmetology Concepts Ii, Part 2** 2 0 0 2
Prerequisites:
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.

COS-114 **Salon II** 0 24 0 8
Prerequisites:
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** 0 12 0 4
Prerequisites:
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.

COS-114B **Salon II** 0 12 0 4
Prerequisites:
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.

COS-115 **Cosmetology Concepts III** 4 0 0 4
Prerequisites:
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** 2 0 0 2
Prerequisites:
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.

COS-115B **Cosmetology Concepts Iii, Part 2** 2 0 0 2
Prerequisites:
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.

COS-116 Salon III 0 12 0 4
Prerequisites:
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:
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.

COS-116B Salon Iii, Part 2 0 6 0 2
Prerequisites:
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.

COS-117 Cosmetology Concepts IV 2 0 0 2
Prerequisites:
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 I 1 0 0 1
Prerequisites:
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.

COS-117B Cosmetology Concepts IV, Part 2 1 0 0 1
Prerequisites:
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.

COS-118 Salon IV 0 21 0 7
Prerequisites:
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:
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.

COS-118B Salon Iv, Part 2 0 6 0 2
Prerequisites:
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.

COS-119 Esthetics Concepts I 2 0 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
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-119B Esthetics Concepts I, Part 2 1 0 0 1
Prerequisites:
Corequisites:
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-120 Esthetics Salon I 0 18 0 6
Prerequisites:
Corequisites:
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facials, body treatments, hair removal, make-up applications, and color analysis. Upon completion, students should be able to safely and competently demonstrate esthetic services on clients in a salon setting.

COS-120A Esthetics Salon I, Part 1 0 9 0 3
Prerequisites:
Corequisites:
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facials, body treatments, hair removal, make-up applications, and color analysis. Upon completion, students should be able to safely and competently demonstrate esthetic services on clients in a salon setting.

COS-120B Esthetics Salon I, Part 2 0 9 0 3
Prerequisites:
Corequisites:
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facials, body treatments, hair removal, make-up applications, and color analysis. Upon completion, students should be able to safely and competently demonstrate esthetic services on clients in a salon setting.

COS-125 Esthetics Concepts II 2 0 0 2
Prerequisites:
Corequisites:
This course covers more comprehensive esthetics concepts. Topics include nutrition, business management, makeup, and color analysis.Upon completion students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements.

COS-125A Esthetics Concepts Ii, Part1 1 0 0 1
Prerequisites:
Corequisites:
This course covers more comprehensive esthetics concepts. Topics include nutrition, business management, makeup, and color analysis.Upon completion students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements.

COS-125B Esthetics Concepts Ii, Part 2 1 0 0 1
Prerequisites:
Corequisites:
This course covers more comprehensive esthetics concepts. Topics include nutrition, business management, makeup, and color analysis.Upon completion students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements.

COS-126 Esthetics Salon II 0 18 0 6
Prerequisites:
Corequisites:
This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, massage therapy, electricity, and apparatus. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology licensing examination for Estheticians.

COS-126A Esthetics Salon Ii, Part 1 0 9 0 3
Prerequisites:
Corequisites:
This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, massage therapy, electricity, and apparatus. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology licensing examination for Estheticians.

COS-126B Esthetics Salon Ii, Part 1 0 9 0 3
Prerequisites:
Corequisites:
This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, massage therapy, electricity, and apparatus. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology licensing examination for Estheticians.

COS-193A Selected Topics in Cosmetology 3 0 0 3
Prerequisites:
Corequisites:
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.

COS-223 **Contemp Hair Coloring** 1 3 0 2
Prerequisites: Take COS-111 COS-112;Take COS-111 COS-112;
Corequisites:
This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a clients color needs and safely and competently perform color applications and correct problems.

COS-224 **Trichology & Chemistry** 1 3 0 2
Prerequisites:
Corequisites:
This course is a study of hair and the interaction of applied chemicals. Emphasis is placed on pH actions and the reactions and effects of chemical ingredients. Upon completion, students should be able to demonstrate an understanding of chemical terminology, pH testing, and chemical reactions on hair.

COS-225 **Advanced Contemporary Hair Coloring** 1 3 0 2
Prerequisites: Take COS-223;Take COS-223;
Corequisites:
This course covers advanced techniques in coloring applications and problem solving situations. Topics include removing unwanted color,replacing pigment and re-coloring, removing coatings, covering grey and white hair, avoiding color fading, and poor tint results. Upon completion, students should be able to apply problem solving techniques in hair coloring situations.

COS-240 **Contemporary Design** 1 3 0 2
Prerequisites: Take COS-111 COS-112;Take COS-111 COS-112;
Corequisites:
This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.

COS-250 **Computerized Salon Ops** 1 0 0 1
Prerequisites:
Corequisites:
This course introduces computer and salon software. Emphasis is placed on various computer and salon software applications. Upon completion, students should be able to utilize computer skills and software applications in the salon setting.

COMPUTER SCIENCE (CSC Prefix)

CSC-120 **Computing Fundamentals I** 3 2 0 4
Prerequisites: Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050; # Take MAT-080; # Take MAT-090; # Take MAT-095; #Take MAT-120(S20803); # Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171(S20807)
Corequisites:
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-120 **Computing Fundamentals I** 3 2 0 4
Prerequisites: Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050; #Take MAT-121(S23927); #Take MAT-171(S23934)
Corequisites:
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-130 Computing Fundamentals II 3 2 0 4
Prerequisites: Take CSC-120(S11470)
Corequisites:
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: Take MAT-070 or DMA-050
Corequisites:
This course introduces computer programming using the C 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-134 C++ Programming 2 3 0 3
Prerequisites: Take CIS-115(S23954) MAT-115(S20802) MAT-171(S23934) or MAT-271(S23939)
Corequisites:
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.

CSC-135 COBOL Programming 2 3 0 3
Prerequisites:
Corequisites:
This course introduces computer programming using the 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-136 Fortran Programming 2 3 0 3
Prerequisites:
Corequisites:
This course introduces computer programming using the Fortran 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-139 Visual BASIC Programming 2 3 0 3
Prerequisites:
Corequisites:
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.

CSC-141 Visual C++ Programming 2 3 0 3
Prerequisites: Take CSC-134(S21066)
Corequisites:
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 Programming 2 3 0 3
Prerequisites:
Corequisites:
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 Programming 2 3 0 3
Prerequisites: Take 1 group; # Take RED-090 MAT-070; # Take ENG-111(S13673) MAT-070; # Take DMA-050 RED-090; # Take DMA-050 ENG-111(S13673)
Corequisites:
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-151 JAVA Programming 2 3 0 3
Prerequisites: Take 1 group; # Take CIS-115(S23954); # Take MAT-110(S23926)
Corequisites:
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.

CSC-152 SAS 2 3 0 3
Prerequisites:
Corequisites:
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; # Take MAT-070 RED-090; # Take MAT-070 ENG-111(S13673); # Take DMA-050 RED-090; # Take DMA-050 ENG-111(S13673)
Corequisites:
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-220 Machine Implementation of Algorithms 3 2 0 4
Prerequisites: Take CSC-120(S11470)
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: Take CSC-125
Corequisites:
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:
Corequisites:
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 Programming 2 3 0 3
Prerequisites: Take CSC-133(S21065)
Corequisites:
This course is a continuation of CSC 133 using the C 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-234 Advanced C++ Programming 2 3 0 3
Prerequisites: Take CSC-134(S21066)
Corequisites:
This course is a continuation of CSC 134 using the C++ programming language with standard programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.

CSC-235 Advanced COBOL Programming 2 3 0 3
Prerequisites: Take CSC-135(S21068)
Corequisites:
This course is a continuation of CSC 135 using the 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-239 Advanced Visual BASIC Programming 2 3 0 3
Prerequisites: Take CSC-139(S21071)
Corequisites:
This course is a continuation of CSC 139 using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

CSC-244 CICS 4 2 0 5
Prerequisites: Take CSC-235(S13666)
Corequisites:
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: Take CSC-133(S14305) CSC-134(S14286) CSC-140 CSC-141(S12799) CSC-145
Corequisites:
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-249 **Data Structure & Algorithms** 2 3 0 3
Prerequisites: Take 1 group; #Take CSC-133(S21065) CSC-151; # Take CSC-134(S21066) CSC-151; # Take CSC-135(S21068) CSC-151; # Take CSC-136(S21069) CSC-151; # Take CSC-138(S21070) CSC-151; # Take CSC-139(S21071) CSC-151;
Corequisites:
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-251 **Advanced JAVA Programming** 2 3 0 3
Prerequisites: Take CSC-151
Corequisites:
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: Take CSC-153
Corequisites:
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-258 **JAVA Enterprise Programs** 2 3 0 3
Prerequisites: Take CSC-151
Corequisites:
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-278 **JAVA Message Service** 2 3 0 3
Prerequisites: Take CSC-151
Corequisites:
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-289 **Programming Capstone Project** 1 4 0 3
Prerequisites: Take CTS-285
Corequisites:
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-291A **Selected Topics in Comp Prog C++ Proje** 0 2 0 1
Prerequisites: Take CSC-234(S21079)
Corequisites:
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.

CSC-292A **Selected Topics in Computer Programming** 1 2 0 2
Prerequisites: Take CSC-239(S21083)
Corequisites:
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.

CSC-297 **Seminar in Comp Prog Visual C# Project** 1 3 0 2
Prerequisites: Take CSC-253
Corequisites:
This course provides an opportunity to explore topics of current interst. 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.

CONSTRUCTION (CST Prefix)

CST-131 **OSHA/Safety/Certification** 2 2 0 3
Prerequisites:
Corequisites:
This course covers the concepts of work site safety. Topics include OSHA regulations, tool safety, and certifications which relate to the construction industry. Upon completion, students should be able to identify and maintain a safe working environment based on OSHA regulations and maintain proper records and certifications.

CST-241 **Planning/Estimating I** 2 2 0 3
Prerequisites: Take BPR-130(S11505) MAT-120(S12252) MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-175
Corequisites:
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-241 **Planning/Estimating I** 2 2 0 3
Prerequisites: Take BPR-130(S11505) MAT-120(S12252) MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-175
Corequisites:
This course covers the procedures involved in planning and estimating a construction/building project. Topics include performing quantity take-offs of materials necessary for a building project. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs involved in a construction project.

CST-241 **Planning/Estimating I** 2 2 0 3
Prerequisites: Take BPR-130(S23275) MAT-121(S23927) or MAT-171(S23934)
Corequisites:
This course covers the procedures involved in planning and estimating a construction/building project. Topics include performing quantity take-offs of materials necessary for a building project. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs involved in a construction project.

CST-242 **Planning/Estimating II** 3 2 0 4
Prerequisites: Take CST-241(S16266)
Corequisites:
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 Building Design** 2 3 0 3
Prerequisites:
Corequisites:
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 TECH INTEGRATION (CTI Prefix)

CTI-110 **Web, Programming, and Database Foundation** 2 2 0 3
Prerequisites:
Corequisites:
This course covers the introduction of the tools and resources available to students in programming, mark-up language and services on the Internet. Topics include standard mark-up language Internet services, creating web pages, using search engines, file transfer programs; and database design and creation with DBMS products. Upon completion students should be able to demonstrate knowledge of programming tools, deploy a web-site with mark-up tools, and create a simple database table.

CTI-120 **Network and Security Foundation** 2 2 0 3
Prerequisites:
Corequisites:
This course introduces students to the Network concepts, including networking terminology and protocols, local and wide area networks, and network standards. Emphasis is placed on securing information systems and the various implementation policies. Upon completion, students should be able to perform basic tasks related to networking mathematics, terminology, media and protocols.

CTI-130 **Operating Systems and Device Foundation** 4 4 0 6
Prerequisites:
Corequisites:
This course covers the basic hardware and software of a personal computer, including installation, operations and interaction with popular microcomputer operating systems. Topics include components 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.

CTI-140 **Virtualization Concepts** 1 4 0 3
Prerequisites: Take CTI-130 or NOS-110
Corequisites:
This course introduces operating system virtualization. Emphasis is placed on virtualization terminology, virtual machine storage, virtual networking and access control. Upon completion, students should be able to perform tasks related to installation, configuration and management of virtual machines.

CTI-141 **Cloud and Storage Concepts** 1 4 0 3
Prerequisites: Take CTI-130
Corequisites:
This course introduces cloud computing and storage concepts. Emphasis is placed on cloud terminology, virtualization, storage networking and access control. Upon completion, students should be able to perform tasks related to installation, configuration and management of cloud storage systems.

CTI-193A **Selected Topics in Troubleshooting Mthd** 3 0 0 3
Prerequisites: Take CTI-130
Corequisites:
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.

CTI-240 Virtualization Administration I 1 4 0 3
Prerequisites: Take CTI-140
Corequisites:
This course covers datacenter virtualization concepts. Topics include data storage, virtual network configuration, virtual machine and virtual application deployment. Upon completion, students should be able to perform tasks related to virtual machine and hypervisor installation and configuration.

CTI-241 Virtualization Administration II 1 4 0 3
Prerequisites: Take CTI-240
Corequisites:
This course covers administration of datacenter virtualization infrastructure. Topics include access control, fault tolerance, scalability, resource management, virtual machine migration and troubleshooting. Upon completion, students should be able to perform tasks related to virtualization security, data protection and resource monitoring.

COMPUTER INFORMATION TECHNOLOGY (CTS Prefix)

CTS-060 Essential Computer Usage 1 2 0 2
Prerequisites:
Corequisites:
This course covers the basic functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to perform basic computer commands, access files, print documents and complete fundamental application operations.

CTS-080 Computing Fundamentals 2 3 0 3
Prerequisites:
Corequisites:
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 (TM) 1 2 0 2
Prerequisites:
Corequisites:
This course includes the fundamentals of the Windows(TM) software. Topics include graphical user interface, icons, directories, file management, accessories, and other applications. Upon completion, students should be able to use Windows(TM) software in an office environment.

CTS-115 Information Systems Business Concepts 3 0 0 3
Prerequisites: Take 1 group; # Take CIS-110(S21058); # Take CIS-111(S21059); # Take SGD-111(S21240); # Take CTI-130
Corequisites:
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 Communcations 2 0 0 2
Prerequisites: Take 1 group; # Take CTS-120(S20998) CTS-135 CIS-110(S21058)
Corequisites:
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: Take CIS-110(S21058) or CIS-111(S21059)
Corequisites:
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-120 Hardware/Software Support 2 3 0 3
Prerequisites:
Corequisites:
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: Take CIS-110(S21058) or CIS-111(S21059)
Corequisites:
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: Take CIS-110(S21058) CIS-111(S21059) or OST-137(S14241)
Corequisites:
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 Intro 2 4 0 4
Prerequisites: Take CIS-110(S21058) or CIS-111(S21059)
Corequisites:
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 Tech Support Functions 2 2 0 3
Prerequisites: Take CIS-110(S21058) or CIS-111(S21059)
Corequisites:
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 in Comp Crimes Investigations 2 3 0 3
Prerequisites:
Corequisites:
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.

CTS-210 Computer Ethics 3 0 0 3
Prerequisites: Take NET-110(S21056) CIS-110(S21058) CIS-111(S21059) or TNE-111(S10460)
Corequisites:
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 Advanced Hardware/Software Support 2 3 0 3
Prerequisites: Take CTS-120(S20998)
Corequisites:
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: Take CTS-130
Corequisites:
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: Take CTS-135
Corequisites:
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: Take CIS-110(S21058) or CIS-111(S21059)
Corequisites:
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: Take CTS-235
Corequisites:
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-255 **Advanced Tech Support Functions** 2 2 0 3
Prerequisites: Take CTS-155
Corequisites:
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-272 **Desktop Support: Applications** 2 2 0 3
Prerequisites: Take CIS-110(S21058) or CIS-111(S21059)
Corequisites:
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: Take CIS-115(S21061) CTS-115
Corequisites:
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-288 **Professional Practices in IT** 2 2 0 3
Prerequisites:
Corequisites:
This course provides students with the business skills needed for success in the information technology field. Topics include portfolio development, resume design, interviewing techniques and professional practices. Upon completion, students should be able to prepare themselves and their work for a career in the information technology field.

CTS-289 **System Support Project** 1 4 0 3
Prerequisites: Take CTS-285 CTS-135 CTS-220 NOS-230(S20989)
Corequisites:
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.

CULINARY (CUL Prefix)

CUL-110 **Sanitation and Safety** 2 0 0 2
Prerequisites: Take 1 group; # Take MAT-070 RED-090 ENG-090; # Take ENG-111(S13673) MAT-070; # Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
This course introduces the basic principles of sanitation and safety relative to the hospitality industry. Topics include personal hygiene, sanitation and safety regulations, use and care of equipment, the principles of food-borne illness, and other related topics. Upon completion, students should be able to demonstrate an understanding of the content necessary for successful completion of a nationally recognized food/safety/sanitation exam.

CUL-112 **Nutrition for Foodservice** 3 0 0 3
Prerequisites: Take CUL-110(S22835) CUL-140(S22844)
Corequisites:
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 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; # Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
This course introduces menu design and its relationship to foodservice operations. Topics include layout, marketing, concept development, dietary concerns, product utilization, target consumers and trends. Upon completion, students should be able to design, create and produce menus for a variety of foodservice settings.

CUL-135 Food and Beverage Service 2 0 0 2
Prerequisites: Take CUL-110(S22835)
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:
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 Culinary Skills I 2 6 0 5
Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; # Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites: CUL-110
This course introduces the fundamental concepts, skills and techniques in basic cookery, and moist, dry and combination heat. Emphasis is placed on recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Upon completion, students should be able to exhibit the basic cooking skills used in the foodservice industry.

CUL-142 Fundamentals of Food 2 6 0 5
Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take MAT-070 ENG-111(S13673); # Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites: CUL-110
This course introduces the student to the basic principles of cooking, baking and kitchen operations. Topics include preparation methods for protein, starch, vegetable/fruit identification/selection, storage; breakfast cookery, breads, sweet dough/pastries, basic fabrication, knife skills, and mise en place. Upon completion, students should be able to execute efficiently a broad range of basic cooking/baking skills as they apply to different stations in foodservice operations.

CUL-160 Baking I 1 4 0 3
Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites: CUL-110 CUL-140
This course covers basic ingredients, techniques, weights and measures, baking terminology and formula calculations. Topics include yeast/chemically leavened products, laminated doughs, pastry dough batter, pies/tarts, meringue, custard, cakes and cookies, icings, glazes and basic sauces. Upon completion, students should be able to demonstrate proper scaling and measurement techniques, and prepare and evaluate a variety of bakery products.

CUL-170 **Garde Manger I** 1 4 0 3
Prerequisites: Take CUL-140(S22844)
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 1 group; #Take MAT-070 RED-090 ENG-090; # Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
This course provides an introduction to information about wine from all the major wine producing regions. Emphasis is placed on the history of wine, production, characteristics, wine list development, laws, purchasing and storing requirements. Upon completion, students should be able to evaluate varietal wines and basic food pairings.

CUL-230 **Global Cuisines** 1 8 0 5
Prerequisites: Take 1 group; #Take CUL-110(S22835) COE-112 CUL-140(S22844) CUL-240(S22853); #Take CUL-110(S22835) CUL-140(S22844) CUL-160(S22847) CUL-170(S22849); Take CUL-110(S11030) CUL-140(S12163)
Corequisites:
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: Take CUL-110(S22835) CUL-140(S22844)
Corequisites:
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: Take CUL-110(S22835) CUL-140(S22844) CUL-160(S22847) CUL-170(S22849) CUL-240(S22853);
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: Take CUL-110(S22835) CUL-160(S22847)
Corequisites:
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: Take CUL-110(S22835) CUL-140(S22844) CUL-170(S22849)
Corequisites:
This course is designed to further students? knowledge in basic cold food preparation techniques and pantry production. Topics include pâtés, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canapés, hors d?oeuvres, and related food items. Upon completion, students should be able to design, set up, and evaluate a catering/event display to include a cold buffet with appropriate showpieces.

CUL-280 **Pastry and Confections** 1 4 0 3
Prerequisites: Take CUL-110(S22835) CUL-140(S22844) CUL-160(S22847)
Corequisites:
This course includes confections and candy, chocolate techniques, transfer sheets, pulled and blown sugar, pastillage, marzipan and custom silicon molding. Emphasis is placed on showpieces, pre-set molding, stencil cutouts, pattern tracing and/or free-hand shaping. Upon completion, students should be able to design and produce centerpieces and showpieces.

CUL-287 **Cultural Experience** 2 2 0 3
Prerequisites: Take CUL-110(S22835) CUL-140(S22844) CUL-240(S22853)
Corequisites:
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)

DBA-110 **Database Concepts** 2 3 0 3
Prerequisites:
Corequisites:
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: Take CIS-110(S12456) CIS-111(S12478) or OST-137(S14241
Corequisites:
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: Take DBA-110
Corequisites:
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:
Corequisites:
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-191A **Selected Topics in Database Management** 1 0 0 1
Prerequisites: Take DBA-120
Corequisites:
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-191A **Selected Topics in DB Management** 1 0 0 1
Prerequisites: Take DBA-120
Corequisites:
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-192 **Selected Topics in Dba:oracle Internet** 0 4 0 2
Prerequisites: Take DBA-120 DBA-240
Corequisites:
This course provides an opportunity to explore areas of current interest in the 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-193A **Selected Topics in Database Management** 2 3 0 3
Prerequisites: Take DBA-260 DBA-230
Corequisites:
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-210 **Database Administration** 2 3 0 3
Prerequisites: Take DBA-110
Corequisites:
This course covers database administration issues and distributed database concepts. Topics include database administrator (DBA) goals and functions, backup and recovery, standards and procedures, training, and database security and performance evaluations. Upon completion, students should be able to produce functional DBA documentation and administer a database.

DBA-220 **Oracle Database Programming II** 2 2 0 3
Prerequisites: Take DBA-120
Corequisites:
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 Database Programming II** 2 2 0 3
Prerequisites: Take DBA-120
Corequisites:
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 Database Programming II** 2 2 0 3
Prerequisites: Take DBA-120
Corequisites:
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 Database Programming II** 2 2 0 3
Prerequisites: Take DBA-120
Corequisites:
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 Database Programming II 2 2 0 3
Prerequisites: Take DBA-120
Corequisites:
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 Databases in Corporate Environments 3 0 0 3
Prerequisites: Take DBA-120 DBA-240
Corequisites:
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 and Design 2 3 0 3
Prerequisites:
Corequisites:
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 Database Management System Admin 2 2 0 3
Prerequisites: Take DBA-120 DBA-240
Corequisites:
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 Database Management System Administration 2 2 0 3
Prerequisites:
Corequisites:
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 Database Management System Admin 2 2 0 3
Prerequisites:
Corequisites:
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 Database Management System Admin 2 2 0 3
Prerequisites: Take DBA-120
Corequisites:
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 Database Management System Admin 2 2 0 3
Prerequisites:
Corequisites:
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: Take NOS-130(S23023) DBA-120
Corequisites:
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.

DBA-271 SQL Server Performance Tuning 2 2 0 3
Prerequisites: Take NOS-130(S20983)
Corequisites:
This course covers SQL Server performance tuning concepts and techniques. Topics include database tuning and SQL Server performance tools. Upon completion, students should be able to configure and diagnose an SQL Server database for optimal performance.

DBA-272 DB2 Performance Tuning 2 2 0 3
Prerequisites: Take NOS-130(S20983)
Corequisites:
This course covers DB2 performance tuning concepts and techniques. Topics include database tuning and DB2 performance tools. Upon completion, students should be able to configure and diagnose a DB2 database for optimal performance.

DBA-273 MySQL Performance Tuning 2 2 0 3
Prerequisites: Take NOS-130(S20983)
Corequisites:
This course covers MySQL performance tuning concepts and techniques. Topics include database tuning and MySQL performance tools. Upon completion, students should be able to configure and diagnose a MySQL database for optimal performance.

DBA-274 SAS Performance Tuning 2 2 0 3
Prerequisites: Take NOS-130(S20983)
Corequisites:
This course covers SAS performance tuning concepts and techniques. Topics include database tuning and SAS performance tools. Upon completion, students should be able to configure and diagnose a SAS database for optimal performance.

DBA-285 Data Warehousing and Mining 2 3 0 3
Prerequisites: Take NOS-130(S20983)
Corequisites:
This course introduces data warehousing and data mining techniques. Emphasis is placed on data warehouse design, data transference, data cleansing, retrieval algorithms, and mining techniques. Upon completion, students should be able to create, populate, and mine a data warehouse.

DBA-289 Database Project 1 4 0 3
Prerequisites: Take DBA-240 DBA-120
Corequisites:
This course provides an opportunity to complete a significant database systems project with minimal instructor support. Emphasis is placed on written and verbal communication skills, documentation, presentation, and user training. Upon completion, students should be able to present an operational database system which they have created.

DBA-292A **Selected Topics in DB Developer** 2 0 0 2
Prerequisites:
Corequisites:
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-293 **Selected Topics in Db Mgmt Mysql Project** 2 2 0 3
Prerequisites: Take DBA-223
Corequisites:
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.

DESIGN DRAFTING (DDF Prefix)

DDF-211 **Design Process I** 1 6 0 4
Prerequisites:
Corequisites:
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: Take DFT-111(S16295) DFT-112(S16296) DFT-151
Corequisites:
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.

DEVELOPMENTAL DISABILITIES (DDT Prefix)

DDT-110 **Developmental Disabilities** 3 0 0 3
Prerequisites:
Corequisites:
This course identifies the characteristics and causes of various disabilities. Topics include history of service provision, human rights, legislation and litigation, advocacy, and accessing support services. Upon completion, students should be able to demonstrate an understanding of current and historical developmental disability definitions and support systems used throughout the life span.

DDT-120 **Teaching Developmental Disabled** 3 0 0 3
Prerequisites: Take DDT-110
Corequisites:
This course covers teaching modalities which enhance learning among people with developmental disabilities. Topics include assessment, support strategies, writing behavioral strategies, teaching methods, and documentation. Upon completion, students should be able to demonstrate competence in individual program plan development and implementation. null This course is a unique requirement of the Developmental Disabilities concentration in the Human Services Technology program.

DDT-210 **DDT Health Issues** 3 0 0 3
Prerequisites: Take DDT-110
Corequisites:
This course introduces the health and medical aspects of assisting people with developmental disabilities. Topics include universal precautions, medication, wellness, nutrition, human sexuality, and accessing medical services. Upon completion, students should be able to identify and implement strategies to promote wellness and manage chronic health

conditions. null This course is a unique requirement the Developmental Disabilities concentration in the Human Services Technology program.

DDT-220 Program Planning Process 3 0 0 3
Prerequisites:
Corequisites:
This course covers the individual program planning process used in services for people with developmental disabilities. Topics include basic components and benefits of the process, the effect of values on outcomes, and group problem-solving methods. Upon completion, students should be able to demonstrate an understanding of effective group process in program planning and the individual roles of team members. null This course is a unique requirement of the Developmental Disabilities concentration in the Human Services Technology program.

DENTAL (DEN Prefix)

DEN-100 Basic Orofacial Anatomy 2 0 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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: Take DEN-101(S20496) DEN-111
Corequisites:
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: Take DEN-106(S14145)
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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 Preclinic Lecture 2 0 0 2
Prerequisites:
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:
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:
Corequisites:
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: Take DEN-110
Corequisites:
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:
Corequisites:
This course provides a study of the management of dental office emergencies. Topics include methods of prevention, necessary equipment/drugs, medicolegal considerations, recognition and effective initial management of a variety of emergencies. Upon completion, the student should be able to recognize, assess and manage various dental office emergencies and activate advanced medical support when indicated.

DEN-130 Dental Hygiene Theory I 2 0 0 2
Prerequisites: Take 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: Take 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: Take 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: Take 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: Take 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: Take 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 & Oral Pathology** 2 0 0 2
Prerequisites: Take BIO-163 BIO-165 or BIO-168(S11555)
Corequisites:
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:
Corequisites:
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: Take DEN-111
Corequisites:
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: Take 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: Take 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:
Corequisites:
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:
Corequisites:
This course includes professional development, ethics, and jurisprudence with applications to practice management. Topics include conflict management, state laws, resumes, interviews, and legal liabilities as health care professionals. Upon completion, students should be able to demonstrate the ability to practice dental hygiene within established ethical standards and state laws.

DESIGN: CREATIVE (DES Prefix)

DES-112 Building and Construction Systems 3 0 0 3
Prerequisites:
Corequisites:
This course provides an overview of the residential construction process for the interior designer. Emphasis is placed on providing the fundamental knowledge needed by the designer in residential construction basics and methods, including electrical and lighting, plumbing, sustainability, mechanical and ventilation, and the building envelope. Upon completion, students should be able to demonstrate effective communication required for effective collaboration with architects, engineers, and building contractors.

DES-125 Graphic Presentation I 0 6 0 2
Prerequisites:
Corequisites:
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 Principles and Elements of Design I 2 4 0 4
Prerequisites:
Corequisites:
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 Business Practices for Interior Design 2 0 0 2
Prerequisites: Take DES-125 ARC-111 DES-135
Corequisites:
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 DES-125 ARC-114(S10248); Take 1 group; # Take DES-135 ARC-111; # Take DES-110; # Take DFT-115;Take DES-125 ARC-114(S10248)
Corequisites:
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:
Corequisites:
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: Take ARC-111 DES-125 ARC-114(S10248)
Corequisites:
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 2 0 3
Prerequisites: Take DES-125 ARC-111
Corequisites:
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 **Commercial/Contract Design I** 1 6 0 3
Prerequisites: Take DES-220(S21676)
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 of Interiors and Furnishings I** 3 0 0 3
Prerequisites:
Corequisites:
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-256 **History of Interiors and Furnishings II** 3 0 0 3
Prerequisites:
Corequisites:
This course covers English, American, and various styles of nineteenth- and twentieth-century furniture, interiors, and exteriors. Emphasis is placed on style recognition, vocabulary, and chronology. Upon completion, students should be able to recognize and describe major styles of furniture, interiors, and exteriors.

DES-265 Lighting/Interior Design 2 0 0 2
Prerequisites: Take DES-125 DES-135 ARC-111
Corequisites:
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-280 Codes & Standards/Interior Design 3 0 0 3
Prerequisites:
Corequisites:
This course introduces institutional and residential building codes as they relate to interior design. Topics include state and federal codes and standards related to physically disadvantaged access, fire codes, space allocation codes, and bathroom facility codes. Upon completion, students should be able to research and interpret state and federal building codes.

DES-285 Capstone/Interior Design 2 6 0 4
Prerequisites: Take DES-210 DES-230 DES-240(S11657)
Corequisites:
This course provides additional studio time to investigate areas of special interest, upgrade weaknesses, and/or capitalize on strengths. Topics include a broad range of options, both residential and non-residential, combining individual research and instructional guidance. Upon completion, students should be able to complete the graphics, client folder, and all schedules for a professional project.

DES-286 Interior Design/Advanced 1 6 0 3
Prerequisites: Take DES-240(S21677); Take DES-230
Corequisites:
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)

DFT-110 Basic Drafting 1 2 0 2
Prerequisites:
Corequisites:
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 drafting fields.

DFT-111 Technical Drafting I 1 3 0 2
Prerequisites:
Corequisites:
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:
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: Take DFT-111(S16295)
Corequisites:
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:
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:
Corequisites:
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:
Corequisites:
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.

DFT-120 Advanced CAD 1 2 0 2
Prerequisites: Take DFT-119
Corequisites:
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.

DFT-121 Introduction to GD&T 1 2 0 2
Prerequisites: Take 1 group; #Take DFT-110; # Take DFT-151; # Take ARC-114(S10248)
Corequisites:
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:
Corequisites:
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: Take 1 group; #Take DFT-110; #Take DFT-151; # Take ARC-114(S10248)
Corequisites:
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: Take DFT-152(S20642)
Corequisites:
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 Intro to Solid Modeling 2 3 0 3
Prerequisites: Take 1 group; #Take DFT-110; #Take DFT-151; #Take ARC-114(S10248)
Corequisites:
This course is an introduction to basic three-dimensional solid modeling and design software. Topics include basic design, creation, editing, rendering and analysis of solid models, and creation of multiview drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multiview drawing.

DFT-170 Engineering Graphics 2 2 0 3
Prerequisites:
Corequisites:
This course introduces basic engineering graphics skills and applications. Topics include sketching, selection and use of current methods and tools, and the use of engineering graphics applications. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices.

DFT-214 Descriptive Geometry 1 2 0 2
Prerequisites: Take DFT-111(S16295) DFT-111A; Take DFT-111(S16295) or DFT-111(S12693)
Corequisites:
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: Take 1 group; #Take DFT-111(S16295) DFT-111A DFT-151 DFT-110
Corequisites:
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.

DFT-251 Customizing CAD Software 2 2 0 3
Prerequisites: Take DFT-151
Corequisites:
This course covers customizing CAD software. Topics include the creation of symbol libraries and screen menus, macro writing, and automation of common drafting functions on CAD. Upon completion, students should be able to create a symbol library and screen menu and automate common drawing functions.

DFT-253 CAD Data Management 2 2 0 3
Prerequisites: Take DFT-151
Corequisites:
This course covers engineering document management techniques. Topics include efficient control of engineering documents, manipulation of CAD drawing data, generation of bill of materials, and linking to spreadsheets or databases. Upon completion, students should be able to utilize systems for managing CAD drawings, extract data from drawings, and link data to spreadsheets or database applications.

DFT-254 Intermediate Solid Modeling & Rendering 2 3 0 3
Prerequisites: Take DFT-154(S20155)
Corequisites:
This course presents a continuation of basic three-dimensional solid modeling and design software. Topics include advanced study of parametric design, creation, editing, rendering and analysis of solid model assemblies, and multiview drawing generation. Upon completion, students should be able to use parametric design techniques to create and analyze the engineering design properties of a model assembly.

DEVELOPMENTAL MATHEAMATICS (DMA Prefix)

DMA-010 Operations With Integers 1 0 0 1
Prerequisites:
Corequisites:
This course provides a conceptual study of integers and integer operations. Topics include integers, absolute value, exponents, square roots, perimeter and area of basic geometric figures, Pythagorean theorem, and use of the correct order of operations. Upon completion, students should be able to demonstrate an understanding of pertinent concepts and principles and apply this knowledge in the evaluation of expressions.

DMA-020 Fractions and Decimals 1 0 0 1
Prerequisites: Take DMA-010
Corequisites:
This course provides a conceptual study of the relationship between fractions and decimals and covers related problems. Topics include application of operations and solving contextual application problems, including determining the circumference and area of circles with the concept of pi. Upon completion, students should be able to demonstrate an understanding of the connections between fractions and decimals.

DMA-030 Proportion/Ratios/Rates/Percents 1 0 0 1
Prerequisites: Take DMA-010 DMA-020
Corequisites:
This course provides a conceptual study of the problems that are represented by rates, ratios, percent, and proportions. Topics include rates, ratios, percent, proportion, conversion of English and metric units, and applications of the geometry of similar triangles. Upon completion, students should be able to use their understanding to solve conceptual application problems.

DMA-040 Expressions, Linear Equations, Linear Inequalities 1 0 0 1
Prerequisites: Take 1 group; #Take DMA-010 DMA-020 DMA-030; #Take MAT-060
Corequisites:
This course provides a conceptual study of problems involving linear expressions, equations, and inequalities. Emphasis is placed on solving contextual application problems. Upon completion, students should be able to distinguish between simplifying expressions and solving equations and apply this knowledge to problems involving linear expressions, equations, and inequalities.

DMA-050 Graphs and Equations of Lines 1 0 0 1
Prerequisites: Take 1 group; #Take DMA-010 DMA-020 DMA-030 DMA-040; #Take MAT-060 DMA-040
Corequisites:
This course provides a conceptual study of problems involving graphic and algebraic representations of lines. Topics include slope, equations of lines, interpretation of basic graphs, and linear modeling. Upon completion, students should be able to solve contextual application problems and represent real-world situations as linear equations in two variables.

DMA-060 Polynomials and Quadratic Applications 1 0 0 1
Prerequisites: Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050; #Take MAT-060 DMA-040 DMA-050; # Take MAT-060 MAT-070
Corequisites:
This course provides a conceptual study of problems involving graphic and algebraic representations of quadratics. Topics include basic polynomial operations, factoring polynomials, and solving polynomial equations by means of factoring. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic applications.

DMA-065 Algebra for Precalculus 2 1 0 2
Prerequisites: Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050
Corequisites:
This course provides a study of problems involving algebraic representations of quadratic, rational, and radical equations. Topics include simplifying polynomial, rational, and radical expressions and solving quadratic, rational, and radical

equations. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic and rational applications.

DMA-070 **Rational Expressions and Equations** 1 0 0 1
Prerequisites: Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060(S23172); #Take MAT-060 DMA-040 DMA-050 DMA-060(S23172); #Take MAT-060 MAT-070 DMA-060(S23172); #Take DMA-010 DMA-020 DMA-030 MAT-070 DMA-060(S23172)
Corequisites:
This course provides a conceptual study of problems involving graphic and algebraic representations of rational equations. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications.

DMA-080 **Radical Expressions and Equations** 1 0 0 1
Prerequisites: Take 1 group; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060(S23172) DMA-070(S23173); # Take MAT-060 MAT-070 DMA-060(S23172) DMA-070(S23173); #Take MAT-060 DMA-040 DMA-050 DMA-060(S23172) DMA-070(S23173);
Corequisites:
This course provides a conceptual study of the manipulation of radicals and the application of radical equations to real-world problems. Topics include simplifying and performing operations with radical expressions and rational exponents, solving equations, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with radical applications.

DEVELOPMENTAL MATH SHELL (DMS Prefix)

DMS-001 **Developmental Math Shell 1** 1 0 0 1
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-001A **Developmental Math Shell 1** 1 0 0 1
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-001B **Developmental Math Shell 1** 1 0 0 1
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-001D **Developmental Math Shell 1** 1 0 0 1
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-001E **Developmental Math Shell 1** 1 0 0 1
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-001F **Developmental Math Shell 1** 1 0 0 1
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-001G **Developmental Math Shell 1** 1 0 0 1
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be one DMA module appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-002 **Developmental Math Shell 2** 2 1 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-002A **Developmental Math Shell 2** 2 1 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-002B **Developmental Math Shell 2** 2 1 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-002D **Developmental Math Shell 2** 2 1 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-002E **Developmental Math Shell 2** 2 1 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-002F **Developmental Math Shell 2** 2 1 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-002G **Developmental Math Shell 2** 2 1 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be two DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-003 **Developmental Math Shell 3** 2 2 0 3
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be three DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-003B **Developmental Math Shell 3** 2 2 0 3
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be three DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-003D **Developmental Math Shell 3** 2 2 0 3
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be three DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-003E **Developmental Math Shell 3** 2 2 0 3
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be three DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DMS-004 **Developmental Math Shell 4** 3 2 0 4
Prerequisites:
Corequisites:
This course provides an opportunity to customize developmental math content in specific developmental math areas. Content will be four DMA modules appropriate to the required level of the student. Upon completion, students should be able to demonstrate an understanding of their specific developmental math area of content.

DRAMA/THEATRE (DRA Prefix)

DRA-111 **Theatre Appreciation** 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-097(S23642)
Corequisites:
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-120 Voice for Performance 3 0 0 3
Prerequisites:
Corequisites:
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: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); # Take DRE-097(S23642)
Corequisites:
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: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673)
Corequisites:
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: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-097(S23642)
Corequisites:
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-130 Acting I 0 6 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080; #Take DRE-097(S23642)
Corequisites:
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: Take DRA-130
Corequisites:
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:
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: Take 1 group; #Take ENG-080 RED-080; #Take DRE-097(S23642)
Corequisites:
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.

DRA-145 Stage Make-Up 1 2 0 2
Prerequisites: Take 1 group; #Take ENG-070(S16349) RED-070(S10648); # Take DRE-096(S23641)
Corequisites:
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-170 Play Production I 0 9 0 3
Prerequisites: Take 1 group; #Take ENG-070(S16349) RED-070(S10648); # Take DRE-096(S23641)
Corequisites:
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: Take DRA-170
Corequisites:
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: Take DRA-131
Corequisites:
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: Take DRA-230
Corequisites:
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-270 Play Production III 0 9 0 3
Prerequisites: Take DRA-171
Corequisites:
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: Take DRA-270
Corequisites:
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.

DEVELOPMENTAL READING/ENGLISH (DRE Prefix)

DRE-096 Integrated Reading and Writing I 2 1 0 3
Prerequisites:
Corequisites:
This course is designed to develop proficiency in specific integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are primarily taught at the introductory level using texts primarily in a Lexile (TM) range of 960 to 1115. Upon completion, students should be able to apply those skills toward understanding a variety of academic and career-related texts and composing effective paragraphs. Please note: (TM) stands for registered trademark.

DRE-097 Integrated Reading and Writing II 2 1 0 3
Prerequisites: Take DRE-096(S23585)
Corequisites:
This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught at a reinforcement level using texts primarily in a Lexile (TM) range of 1070 to 1220. Upon completion, students should be able to demonstrate and apply those skills toward understanding a variety of complex academic and career texts and composing essays incorporating relevant, valid evidence. Please note: (TM) represents registered trademark.

DRE-098 Integrated Reading and Writing III 2 1 0 3
Prerequisites: Take DRE-097(S23586)
Corequisites:
This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are taught using texts primarily in the Lexile (TM) range of 1185 to 1385. Upon completion, students should be able to apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essay. Note: (TM) represents registered trademark.

DRE-099 Integrated Reading Writing III Option 2 0 0 2
Prerequisites: Take DRE-097(S23586)
Corequisites: ENG-111
This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies by complementing, supporting and reinforcing material covered in ENG 111. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught using texts primarily in the Lexile (TM) range of 1185 to 1385. Upon completion, students should be able to apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essay. Note: (TM) represents registered trademark.

ELECTRONIC COMMERCE (ECM Prefix)

ECM-210 Introduction to E-Commerce 2 2 0 3
Prerequisites:
Corequisites:
This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to setup a working e-commerce Internet web site.

ECONOMICS (ECO Prefix)

ECO-151 Survey of Economics 3 0 0 3
Prerequisites:
Corequisites:
This course, for those who have not received credit for ECO 251 or 252, introduces basic concepts of micro- and macroeconomics. Topics include supply and demand, optimizing economic behavior, prices and wages, money, interest rates, banking system, unemployment, inflation, taxes, government spending, and international trade. Upon completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors.

ECO-251 Principles of Microeconomics 3 0 0 3
Prerequisites:
Corequisites:
This course introduces economic analysis of individual, business, and industry in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives.

ECO-252 Principles of Macroeconomics 3 0 0 3
Prerequisites:
Corequisites:
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)

EDU-114 Introduction to Family Childcare 3 0 0 3
Prerequisites: Take DMA-010 DMA-020 DMA-030
Corequisites: DRE-097
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-114 Introduction to Family Childcare 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080 MAT-060; # Take ENG-085 MAT-060; # Take MAT-060 ENG-111(S13673); # Take DMA-040 ENG-080 RED-080; # Take ENG-111(S13673) DMA-040
Corequisites:
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 Introduction to Early Childhood Education 4 0 0 4
Prerequisites:
Corequisites:
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.

EDU-131 Child, Family, and Community 3 0 0 3
Prerequisites:
Corequisites: DRE-097
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.

EDU-131 Child, Family, and Community 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080; #Take ENG-085
Corequisites:
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.

EDU-144 Child Development I 3 0 0 3
Prerequisites:
Corequisites: DRE-097
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.

EDU-144 Child Development I 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-080 RED-080; # Take ENG-085
Corequisites:
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.

EDU-145 Child Development II 3 0 0 3
Prerequisites:
Corequisites: DRE-097
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.

EDU-145 Child Development II 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080 EDU-119(S22283); # Take ENG-085 EDU-119(S22283);
Take 1 group; #Take ENG-080 RED-080; # Take ENG-085;
Corequisites:
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.

EDU-146 Child Guidance 3 0 0 3
Prerequisites:
Corequisites: DRE-097
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.

EDU-146 Child Guidance 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-080 RED-080 EDU-119(S22283); #Take ENG-080 RED-080 EDU-144(S22288); # Take ENG-080 RED-080 EDU-145(S22289); #Take ENG-085 EDU-119(S22283); # Take ENG-085 EDU-144(S22288); #Take ENG-085
Corequisites:
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.

EDU-151 Creative Activities 3 0 0 3
Prerequisites:
Corequisites: DRE-097
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.

EDU-151 Creative Activities 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080 EDU-119(S22283) EDU-144(S22288) EDU-145(S22289) EDU-146(S22290) EDU-157(S22303) ENG-111(S13673); #Take ENG-085 EDU-119(S22283) EDU-144(S22288) EDU-145(S22289) EDU-146(S22290) EDU-157(S22303)
Corequisites:
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.

EDU-153 Health, Safety and Nutrition 3 0 0 3
Prerequisites:
Corequisites: DRE-097
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.

EDU-153 Health, Safety and Nutrition 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080; # Take ENG-085
Corequisites:
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.

EDU-157 Active Play 2 2 0 3
Prerequisites:
Corequisites: DRE-097
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-157 Active Play 2 2 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080; #Take ENG-085
Corequisites:
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-158 Healthy Lifestyles-Youth 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080; #Take ENG-085
Corequisites:
This course introduces the topics of health, safety, nutrition, physical activities and environments for the school-age child/youth that promote development, fitness and healthy lifestyles. Topics include the use of physical and nutritional/cooking activities (indoor/outdoor, teacher-directed/youth-directed) appropriate for youth developing typically/atypically; safe/healthy menu planning; safe/healthy environmental design, assessment and supervision. Upon completion, students should be able to plan/facilitate safe/healthy physical and nutritional/cooking activities, discuss safety policies/regulations and identify health/safety/nutritional needs of youth.

EDU-158 Healthy Lifestyles-Youth 3 0 0 3
Prerequisites:
Corequisites: DRE-097
This course introduces the topics of health, safety, nutrition, physical activities and environments for the school-age child/youth that promote development, fitness and healthy lifestyles. Topics include the use of physical and nutritional/cooking activities (indoor/outdoor, teacher-directed/youth-directed) appropriate for youth developing typically/atypically; safe/healthy menu planning; safe/healthy environmental design, assessment and supervision. Upon completion, students should be able to plan/facilitate safe/healthy physical and nutritional/cooking activities, discuss safety policies/regulations and identify health/safety/nutritional needs of youth.

EDU-163 Classroom Management and Instruction 3 0 0 3
Prerequisites:
Corequisites: DRE-097
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-163 Classroom Management and Instruction 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-080 RED-080; # Take ENG-085
Corequisites:
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 Childhood Introductory Practicum 1 3 0 2
Prerequisites: Take EDU-119(S22283)
Corequisites: DRE-097
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-184 Early Childhood Introductory Practicum 1 3 0 2
Prerequisites: Take 1 group; #Take EDU-119(S22283) ENG-080 RED-080 EDU-131(S22287); #Take EDU-119(S22283) ENG-085 EDU-131(S22287); Take 1 group; # Take EDU-119(S20176) ENG-080 RED-080; #Take EDU-119(S20176) ENG-085
Corequisites:
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 Childhood Education 2 0 0 2
Prerequisites: Take 1 group; # Take ENG-080 RED-080 EDU-119(S22283); #Take ENG-085 EDU-119(S22283); Take 1 group; # Take ENG-080 RED-080; #Take ENG-085
Corequisites:
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 4 0 0 4
Prerequisites:
Corequisites: DRE-098
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.

EDU-216 Foundations of Education 4 0 0 4
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-095
Corequisites:
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.

EDU-221 Children With Exceptionalities 3 0 0 3
Prerequisites: Take 1 group; #Take EDU-144(S23693) EDU-145(S23694); # ake PSY-244(S12069) PSY-245(S11997)
Corequisites: DRE-098
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.

EDU-221 **Children With Exceptionalities** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090 EDU-144(S22288) EDU-145(S22289) EDU-119(S22283); #Take ENG-090 RED-090 PSY-244(S12069) PSY-245(S11997) EDU-119(S22283); # Take ENG-095 EDU-144(S22288) EDU-145(S22289) EDU-119(S22283 #Take 1 group; # Take ENG-095 PSY-244(S12069) PSY-245(S11997);
Corequisites:
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.

EDU-234 **Infants, Toddlers, & Twos** 3 0 0 3
Prerequisites: Take EDU-119(S22283)
Corequisites: DRE-098
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-234 **Infants, Toddlers, & Twos** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090 EDU-119(S22283) EDU-144(S22288); #Take ENG-095 EDU-119(S22283) EDU-144(S22288); Take 1 group; #Take ENG-095 EDU-119(S22283)
Corequisites:
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 Development and Programs** 3 0 0 3
Prerequisites:
Corequisites: DRE-098
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-235 **School-Age Development and Programs** 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090 EDU-119(S22283); #Take ENG-095 EDU-119(S22283); Take 1 group; # Take ENG-090 RED-090; # Take ENG-095;Take 1 group; # Take ENG-090 RED-090 EDU-119(S22283); #Take ENG-095 EDU-119(S22283)
Corequisites:
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:
Corequisites: DRE-098
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-243 Learning Theory 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-095
Corequisites:
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 and Development 3 0 0 3
Prerequisites:
Corequisites: DRE-098
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-244 Human Growth and Development 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-095
Corequisites:
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:
Corequisites: DRE-098
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-245 Policies and Procedures 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-095
Corequisites:
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:
Corequisites: DRE-098
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-251 Exploration Activities 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090 EDU-151(S22294) ENG-112(S13681); #Take ENG-095 EDU-151(S22294) ENG-112(S13681); Take 1 group; #Take ENG-090 RED-090; # Take ENG-095
Corequisites:
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-251A **Exploration Activities Lab** 0 2 0 1
Prerequisites:
Corequisites: EDU-251, DRE-098
This course provides a laboratory component to complement EDU 251. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate science, math, and social studies activities for children.

EDU-251A **Exploration Activities Lab** 0 2 0 1
Prerequisites: Take 1 group; #Take ENG-090 RED-090; # Take ENG-095
Corequisites: EDU-251
This course provides a laboratory component to complement EDU 251. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate science, math, and social studies activities for children.

EDU-261 **Early Childhood Administration I** 3 0 0 3
Prerequisites:
Corequisites: EDU-119, DRE-098
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.

EDU-261 **Early Childhood Administration I** 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take 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.

EDU-262 **Early Childhood Administration II** 3 0 0 3
Prerequisites: Take EDU-261(S23733)
Corequisites: EDU-119, DRE-098
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.

EDU-262 **Early Childhood Administration II** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090 EDU-261(S22346); # Take ENG-095 EDU-261(S22346)
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.

EDU-263 School-Age Program Administration 2 0 0 2
Prerequisites:
Corequisites: DRE-098
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-263 School-Age Program Administration 2 0 0 2
Prerequisites: Take 1 group; #Take ENG-090 RED-090 EDU-119(S22283); # Take ENG-095 EDU-119(S22283); Take 1 group; #Take ENG-090 RED-090; # Take ENG-095
Corequisites:
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:
Corequisites: DRE-098
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.

EDU-271 Educational Technology 2 2 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090 ENG-112(S13681) CIS-111(S21059) PSY-150; #Take ENG-090 RED-090 ENG-112(S13681) CIS-111(S21059) SOC-210; #Take ENG-095 ENG-112(S13681) CIS-111(S21059) PSY-150; # Take ENG-095 ENG-112 #Take ENG-090 RED-090; #Take ENG-095;
Corequisites:
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.

EDU-280 Language and Literacy Experiences 3 0 0 3
Prerequisites:
Corequisites: DRE-098
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.

EDU-280 Language and Literacy Experiences 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090 EDU-282(S22341); #Take ENG-095 EDU-282(S22341); Take 1 group; #Take ENG-090 RED-090; # Take ENG-095
Corequisites:
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.

EDU-282 **Early Childhood Literature** 3 0 0 3
Prerequisites:
Corequisites: DRE-098
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-282 **Early Childhood Literature** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090 EDU-119(S22283) EDU-144(S22288) EDU-145(S22289) EDU-146(S22290) ENG-111(S13673); #Take ENG-095 EDU-119(S22283) EDU-144(S22288) EDU-145(S22289) EDU-146(S22290) ENG-111(S13673); Take 1 group; #Take ENG-090 RED-090; #Take ENG-095;
Corequisites:
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 Childhood Capstone Practicum** 1 9 0 4
Prerequisites: Take 1 group; #Take EDU-119(S22283) EDU-144(S23693) EDU-145(S23694) EDU-146(S23695) EDU-151(S23704); #Take EDU-119(S22283) PSY-244(S12069) PSY-245(S11997) EDU-146(S23695) EDU-151(S23704); #Take EDU-119(S22283) PSY-245(S11997) Take 1 group #Take EDU-119(S22283) PSY-245(S11997)
Corequisites: DRE-098
This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

EDU-284 **Early Childhood Capstone Practicum** 1 9 0 4
Prerequisites: Take 1 group; # Take EDU-131(S22287) EDU-221(S22318) EDU-261(S22346) EDU-282(S22341) ENG-090 RED-090 EDU-119(S22283) PSY-244(S12069) PSY-245(S11997) EDU-146(S22290) EDU-151(S22294); #Take EDU-131(S22287) EDU-221(S22318) EDU-261 Take 1 group: # Take ENG-090 RED-090 EDU-119(S22283) PSY-244(S12069) PSY-245(S11997) EDU-146(S22290) EDU-151(S22294); #Take ENG-090 RED-090 EDU-119(S22283) EDU-144(S22288) EDU-145(S22289) EDU-146(S22290) EDU-151(S22294)
Corequisites:
This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

EDU-287 **Leadership in Early Childhood Education** 3 0 0 3
Prerequisites: Take 1 group; #Take EDU-119(S22283) EDU-131(S23692) EDU-144(S23693) EDU-145(S23694); # Take EDU-119(S22283) EDU-131(S23692) PSY-244(S12069) PSY-245(S11997)
Corequisites: DRE-098
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.

EDU-287 **Leadership in Early Childhood Education** 3 0 0 3

Prerequisites: Take 1 group; # Take EDU-251(S22331) EDU-261(S22346) EDU-282(S22341) ENG-090 RED-090 EDU-119(S22283) EDU-131(S22287) EDU-144(S22288) EDU-145(S22289); #Take EDU-251 (S22331) EDU-261(S22346) EDU-282(S22341) ENG-090 RED-090 EDU-119; Take 1 group; # Take ENG-090 RED-090 EDU-119(S22283) EDU-131(S22287) EDU-144(S22288) EDU-145 (S22289); # Take ENG-090 RED-090 EDU-119(S22283) EDU-131(S22287) PSY-244(S12069) PSY-245(S11997); #Take ENG-095 EDU-119(S22283) EDU-131

Corequisites:

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)

EFL-030 **English for Special Purpo** 3 0 0 3

Prerequisites:

Corequisites:

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 Purp** 5 0 0 5

Prerequisites:

Corequisites:

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 will demonstrate improved academic language, content-specific vocabulary and skills, and cultural knowledge in the topic area.

EFL-055 **English for Special Purpo** 3 0 0 3

Prerequisites:

Corequisites:

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.

EFL-061 **Listening/Speaking I** 5 0 0 5

Prerequisites:

Corequisites:

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.

EFL-062 **Listening/Speaking II** 5 0 0 5

Prerequisites: Take EFL-061

Corequisites:

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: Take EFL-062
Corequisites:
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: Take EFL-063
Corequisites:
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:
Corequisites:
This course is designed to help those 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.

EFL-072 **Reading II** 5 0 0 5
Prerequisites: Take EFL-071
Corequisites:
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.

EFL-073 **Reading III** 5 0 0 5
Prerequisites: Take EFL-072
Corequisites:
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.

EFL-074 **Reading IV** 5 0 0 5
Prerequisites: Take EFL-073
Corequisites:
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.

EFL-081 **Grammar I** 5 0 0 5
Prerequisites:
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: Take EFL-081
Corequisites:
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: Take EFL-082
Corequisites:
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: Take EFL-083
Corequisites:
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:
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.

EFL-092 **Composition II** 5 0 0 5
Prerequisites: Take EFL-091
Corequisites:
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 use the major elements of the writing process, sentence, paragraph, and essay.

EFL-093 **Composition III** 5 0 0 5
Prerequisites: Take EFL-092
Corequisites:
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.

EFL-094 **Composition IV** 5 0 0 5
Prerequisites: Take EFL-093
Corequisites:
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, the writing process, and thegrammatical 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.

EFL-095 **Composition V** 5 0 0 5
Prerequisites: Take EFL-094
Corequisites:
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.

ENGINEERING (EGR Prefix)

EGR-115 **Intro to Technology** 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the basic skills and career fields for technicians. Topics include career options, technical vocabulary, dimensional analysis, measurement systems, engineering graphics, calculator applications, professional ethics, safety practices, and other related topics. Upon completion, students should be able to demonstrate an understanding of the basic technologies, prepare drawings and sketches, and perform computations using a scientific calculator.

EGR-120 **Engineering and Design Graphics** 2 2 0 3
Prerequisites:
Corequisites:
This course introduces the graphical tools 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 or two-dimensional and three-dimensional objects using the proper tools and methods.

EGR-125 **Appl Software for Tech** 1 2 0 2
Prerequisites:
Corequisites:
This course introduces personal computer software and teaches students how to customize the software for technical applications. Emphasis is placed on the use of common office applications software programs such as spreadsheets, word processing, graphics, and internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

EGR-131 **Introduction to Electronics Technology** 1 2 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
This course is an overview of the engineering profession. Topics include goal setting and career assessment, ethics, public safety, the engineering method and design process, written and oral communication, interpersonal skills and team building, and computer applications. Upon completion, students should be able to understand the engineering process, the engineering profession, and utilize college resources to meet their educational goals.

EGR-210 **Intro to Electrical/Computer Engineering Lab** 1 3 0 2
Prerequisites: Take MAT-271(S13631) PHY-251
Corequisites:
This course provides an overview of electrical and computer engineering, through a lecture and laboratory setting. Topics

include fundamental concepts, electronic circuits, digital circuits, communication systems, and signal processing. Upon completion, students should be able to discuss the wide range of fields available to the electrical or computer engineer.

EGR-211 Intro to Computer Organization 3 0 0 3
Prerequisites: Take MAT-271(S13631) PHY-251 CSC-134(S14286)
Corequisites:
This course provides an introduction to key concepts in computer organization. Topics include number representations, switching circuits, logic design, microprocessor design, assembly programming, interrupts and traps, structured program development and the C programming language. Upon completion, students should be able to represent numbers in various systems; to explain the functions of a microprocessor; and to design logic systems and circuits.

EGR-212 Logic System Design I 3 0 0 3
Prerequisites: Take MAT-271(S13631) PHY-251
Corequisites:
This course provides an introduction to digital circuits and analysis. Topics include Boolean Algebra; mixed logic; design of combinational circuits; introduction to sequential systems; and MSI building blocks. Upon completion, students should be able to analyze and design digital circuits and systems.

EGR-213 Electric Circuits 3 3 0 4
Prerequisites: Take MAT-271(S13631) PHY-251 EGR-210
Corequisites:
This course provides an introduction to theory, analysis and design of electric circuits. Topics include voltage, current, power, resistance, capacitance, inductance, Kirchoff's laws, nodal and mesh analysis, Thevenin's theorem, Norton's theorem, steady state and transient analysis, and operational amplifiers. Upon completion, students should be able to explain voltage, current, and power; to analyze electric circuits; and to design circuits using operational amplifiers.

EGR-220 Engineering Statics 3 0 0 3
Prerequisites: Take PHY-251; Minimum grade C;
Corequisites: MAT-272, MAT-273
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.

EGR-225 Engineering Dynamics 3 0 0 3
Prerequisites: Take 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.

EGR-228 Intro to Solid Mechanics 3 0 0 3
Prerequisites: Take EGR-220
Corequisites:
This course provides an introduction to engineering theory of deformable solids and applications. Topics include stress and deformation resulting from axial, torsion, and bending loads; shear and moment diagrams; Mohr's circle of stress; and strain and buckling of columns. Upon completion, students should be able to analyze solids subject to various forces and design systems using a variety of materials.

EGR-230 Engineering Materials 3 0 0 3
Prerequisites: Take CHM-151
Corequisites:
This course provides an introduction to fundamental physical principals governing the structure and constitution of metallic and nonmetallic materials. Topics include the relationships among the fundamental physical principles and the mechanical, physical and chemical properties of engineering materials. Upon completion, students should be able to explain the fundamental physical properties important to the design and understanding of engineering materials.

EGR-251 **Statics** 2 2 0 3
Prerequisites: Take MAT-121(S20804)
Corequisites:
This course covers the concepts and principles of statics. Topics include systems of forces and moments on structures in two- and three-dimensions in equilibrium. Upon completion, students should be able to analyze forces and moments on structures.

EGR-252 **Strength of Materials** 2 2 0 3
Prerequisites: Take EGR-251
Corequisites:
This course covers the principles and concepts of stress analysis. Topics include centroids, moments of inertia, shear/moment diagrams, and stress and strain. Upon completion, students should be able to perform a stress and strain analysis on structural components.

EGR-285 **Design Project** 0 4 0 2
Prerequisites: Take 1 group; #Take EGR-115(S20666) DFT-110; # Take EGR-115(S20666) DFT-151; # Take EGR-115(S20666) ARC-114(S10248)
Corequisites:
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)

ELC-111 **Introduction to Electricity** 2 2 0 3
Prerequisites:
Corequisites:
This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronics majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

ELC-112 **DC/AC Electricity** 3 6 0 5
Prerequisites:
Corequisites:
This course introduces the fundamental concepts of and computations related to DC/AC electricity. Emphasis is placed on DC/AC circuits, components, operation of test equipment; and other related topics. Upon completion, students should be able to construct, verify, and analyze simple DC/AC circuits.

ELC-112 **DC/AC Electricity** 3 6 0 5
Prerequisites:
Corequisites:
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 **Residential Wiring** 2 6 0 4
Prerequisites:
Corequisites: ELC-118
This course introduces the care/usage of tools and materials used in residential electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical print reading; planning, layout; and installation of electrical distribution equipment; lighting; overcurrent protection; conductors; branch circuits; and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with residential electrical installations.

ELC-113 **Basic Wiring I** 2 6 0 4
Prerequisites:
Corequisites:
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 **Commercial Wiring** 2 6 0 4
Prerequisites: Take ELC-113(S23518)
Corequisites:
This course provides instruction in the application of electrical tools, materials, and test equipment associated with commercial electrical installations. Topics include the NEC; safety; electrical blueprints; planning, layout, and installation of equipment and conduits; and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with commercial electrical installations.

ELC-114 **Basic Wiring II** 2 6 0 4
Prerequisites: Take ELC-113(S11805)
Corequisites:
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: Take ELC-114(S21588)
Corequisites:
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-115 **Industrial Wiring** 2 6 0 4
Prerequisites: Take ELC-114(S23519)
Corequisites:
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: Take 1 group; #Take ELC-111; # Take ELC-112(S23481); # Take ELC-131(S23482)
Corequisites:
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-117 **Motors and Controls** 2 6 0 4
Prerequisites: Take ELC-111 ELC-112(S21587) or ELC-131(S21593)
Corequisites:
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:
Corequisites:
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: Take ELC-118
Corequisites:
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: Take ELC-113(S11805) ELC-114(S21588)
Corequisites:
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:
Corequisites:
This course introduces the fundamental applications of mathematics which are used by an electrical/electronics technician. Topics include whole numbers, fractions, decimals, powers, roots, simple electrical formulas, and usage of a scientific calculator. Upon completion, students should be able to solve simple electrical mathematical problems.

ELC-127 Software for Technicians 1 3 0 2
Prerequisites:
Corequisites:
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 Introduction to PLC 2 3 0 3
Prerequisites: Take ELC-117(S21589) or ELC-131(S21593)
Corequisites:
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-128 Introduction to Programmable Logic Controller 2 3 0 3
Prerequisites: Take ELC-117(S23521) or ELC-131(S23482)
Corequisites:
This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to understand basic PLC systems and create simple programs.

ELC-131 Circuit Analysis I 3 3 0 4
Prerequisites: Take DMA-050 DRE-097(S23642)
Corequisites: ELC-131A
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-131 DC/AC Circuit Analysis 4 3 0 5
Prerequisites:
Corequisites:
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-131A Circuit Analysis I Lab 0 3 0 1
Prerequisites:
Corequisites: ELC-131
This course provides laboratory assignments as applied to fundamental principles of DC/AC electricity. Emphasis is placed on measurements and evaluation of electrical components, devices and circuits. Upon completion, the students will gain hands-on experience by measuring voltage, current, and opposition to current flow utilizing various meters and test equipment.

ELC-134 Transformer Applications 1 2 0 2
Prerequisites: Take ELC-112(S21587)
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-139 AC Circuit Analysis 3 3 0 4
Prerequisites:
Corequisites:
This course introduces AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include AC voltages, circuit analysis laws and theorems, reactive components and circuits, transformers, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret AC circuit schematics; analyze and troubleshoot AC circuits; and properly use test equipment.

ELC-228 Programmable Logic Controllers Applications 2 6 0 4
Prerequisites:
Corequisites:
This course covers programming and applications of programmable logic controllers. Emphasis is placed on programming techniques, networking, specialty I/O modules, and system troubleshooting. Upon completion, students should be able to specify, implement, and maintain complex PLC controlled systems.

ELC-229 Applications Project 1 3 0 2
Prerequisites: Take ELC-113(S11805) ELC-128(S10676) ELN-229(S21638) ELN-133(S16330)
Corequisites:
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:
Corequisites:
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:
Corequisites:
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)

ELN-110 Survey of Electronics 2 2 0 3
Prerequisites:
Corequisites:
This course introduces fundamental electrical and electronic concepts for non-electronic majors. Emphasis is placed on terminology and devices used in basic electronic and digital applications. Upon completion, students should be able to demonstrate a grasp of the fundamentals of modern electronic circuits.

ELN-112 Diesel Electronics System 2 6 0 4
Prerequisites:
Corequisites:
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:
Corequisites:
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 Telecom Digital Logic 3 3 0 4
Prerequisites:
Corequisites:
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 Analog Electronics I 3 3 0 4
Prerequisites: Take ELC-131(S23482)
Corequisites:
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog circuits using appropriate techniques and test equipment.

ELN-131 Semiconductor Applications 3 3 0 4
Prerequisites:
Corequisites: ELC-112, ELC-131, ELC-140
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot discrete component circuits using appropriate techniques and test equipment.

ELN-132 Analog Electronics II 3 3 0 4
Prerequisites: Take ELN-131(S23487)
Corequisites:
This course covers additional applications of analog electronic circuits with an emphasis on analog and mixed signal integrated circuits (IC). Topics include amplification, filtering, oscillation, voltage regulation, and other analog circuits. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog electronic circuits using appropriate techniques and test equipment.

ELN-132 Linear Integrated Circuits Applications 3 3 0 4
Prerequisites: Take ELN-131(S21622)
Corequisites:
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:
Corequisites:
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.

ELN-133 Digital Electronics 3 3 0 4
Prerequisites: Take DRE-097(S23642)
Corequisites:
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (AD) and digital to analog (DA) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

ELN-150 Computer-Aided Drafting for Electronics 1 3 0 2
Prerequisites: Take CIS-110(S21058) CIS-111(S21059) or ELC-127(S21592)
Corequisites:
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-152 Fabrication Techniques 1 3 0 2
Prerequisites: Take ELN-131(S23487) ELN-232(S21640)
Corequisites:
This course covers the fabrication methods required to create a prototype product from the initial circuit design. Topics include CAD, layout, sheet metal working, component selection, PC board layout and construction, reverse engineering, soldering, and other related topics. Upon completion, students should be able to design and construct an electronic product with all its associated documentation.

ELN-154 Introduction to Data Communication 2 3 0 3
Prerequisites: Take ELN-133(S16330)
Corequisites:
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 Elec. Engineering** 2 3 0 3
Prerequisites:
Corequisites:
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.

ELN-229 **Industrial Electronics** 3 3 0 4
Prerequisites: Take ELC-112(S23481)
Corequisites:
This course covers semiconductor devices used in industrial applications. Topics include the basic theory, application, and operating characteristics of semiconductor devices. Upon completion, students should be able to construct and/or troubleshoot these devices for proper operation in an industrial electronic circuit.

ELN-229 **Industrial Electronics** 3 3 0 4
Prerequisites: Take ELC-112(S21587)
Corequisites:
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: Take ELC-112(S21587)
Corequisites:
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-229B **Industrial Electronics Part 2** 0 3 0 1
Prerequisites: Take ELN-229A
Corequisites:
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-231 **Industrial Controls** 2 3 0 3
Prerequisites: Take ELC-131(S23482)
Corequisites:
This course introduces the fundamental concepts of control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret schematics and demonstrate an understanding of electromechanical and electronic control of rotating machinery.

ELN-232 **Introduction to Microprocessors** 3 3 0 4
Prerequisites: Take ELN-133(S23488)
Corequisites:
This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include low-level language programming, bus architecture, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment.

ELN-233 **Microprocessor Systems** 3 3 0 4
Prerequisites: Take ELN-133(S23488)
Corequisites:
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: Take ELN-132(S21623) or ELN-140
Corequisites:
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 Systems 3 3 0 4
Prerequisites: Take ELN-131(S23487)
Corequisites:
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: Take ELN-131(S23487)
Corequisites:
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-249 Digital Communication 2 3 0 3
Prerequisites: Take ELN-131(S23487)
Corequisites:
This course covers the core processes and applications associated with digital communication techniques. Topics include the characteristics of RF circuits, modulation, transmitters and receivers, electromagnetic transmission, antennas, and related applications. Upon completion, students should be able to demonstrate knowledge of the concepts associated with digital communication systems.

ELN-275 Troubleshooting 1 3 0 2
Prerequisites:
Corequisites: ELN-131
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)

EMS-110 EMT 6 6 0 8
Prerequisites:
Corequisites:
This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.

EMS-110A Emt-Basic Part 1 2 3 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; # Take ENG-111(S13673)
Corequisites:
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-110B **Emt-Basic Part 2** 3 3 0 4
Prerequisites: Take EMS-110A
Corequisites:
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-120 **Intermediate Intervention** 2 3 0 3
Prerequisites: Take EMS-110(S16335)
Corequisites:
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: Take EMS-110(S16335)
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-122 **EMS Clinical Practicum I** 0 0 3 1
Prerequisites: Take EMS-110(S23869)
Corequisites: EMS-130
This course provides the introductory hospital clinical experience for the paramedic student. Emphasis is placed on mastering fundamental paramedic skills. Upon completion, students should be able to demonstrate competence with fundamental paramedic level skills.

EMS-125 **EMS Instructor Methodology** 1 2 0 2
Prerequisites:
Corequisites:
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.

EMS-130 **Pharmacology** 3 3 0 4
Prerequisites: Take EMS-110(S23869)
Corequisites: EMS-122
This course introduces the fundamental principles of pharmacology and medication administration and is required for paramedic certification. Topics include medical terminology, pharmacological concepts, weights, measures, drug calculations, vascular access for fluids and medication administration and legislation. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology.

EMS-131 **Advanced Airway Management** 1 2 0 2
Prerequisites: Take EMS-110(S16335)
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:
Corequisites:
This course introduces rescue scene management. Topics include response to hazardous material conditions, incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment.

EMS-140A Rescue Scene Skills Lab 0 3 0 1
Prerequisites:
Corequisites: EMS-140
This course is designed to provide enhanced rescue scene skills for EMS providers. Emphasis is placed on advanced rescue scene evolutions including hazardous materials and major incident response. Upon completion, students should be able to demonstrate skills necessary to safely effect patients rescue in a variety of situations.

EMS-150 Emergency Vehicles and EMS Communication 1 3 0 2
Prerequisites:
Corequisites:
This course covers the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs.

EMS-160 Cardiology I 1 3 0 2
Prerequisites: Take EMS-110(S23869)
Corequisites:
This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and basic rhythm interpretation in the monitoring leads. Upon completion, students should be able to recognize and interpret basic rhythms.

EMS-210 Advanced Patient Assessment 1 3 0 2
Prerequisites: Take 1 group; # Take EMS-120(S10478) EMS-130(S16339) EMS-131(S13314) EMS-121(S10423); # Take EMS-120(S10478) EMS-130(S16339) EMS-131(S13314) EMS-122(S10485)
Corequisites:
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 II 2 3 0 3
Prerequisites: Take EMS-122(S23872) EMS-130(S23874) EMS-160
Corequisites:
This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include assessment and treatment of cardiac emergencies, application and interpretation of advanced electrocardiography utilizing the twelve-lead ECG, cardiac pharmacology, and patient care. Upon completion, students should be able to assess and treat patients utilizing American Heart Association guidelines.

EMS-221 EMS Clinical Practicum II 0 0 6 2
Prerequisites: Take EMS-122(S23872) EMS-130(S23874)
Corequisites:
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on increasing the proficiency of students' skills and abilities in patient assessments and the delivery of care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.

EMS-230 **Pharmacology II for EMS** 1 3 0 2
Prerequisites: Take EMS-130(S16339)
Corequisites:
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: Take EMS-130(S23874) EMS-221(S23879)
Corequisites:
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.

EMS-235 **EMS Management** 2 0 0 2
Prerequisites:
Corequisites:
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.

EMS-240 **Patients With Special Challenges** 1 2 0 2
Prerequisites: Take EMS-122(S23872) EMS-130(S23874)
Corequisites:
This course includes concepts of crisis intervention and techniques of interacting with patients with special challenges and is required for paramedic certification. Topics include appropriate intervention and interaction for neglected, abused, terminally ill, chronically ill, technology assisted, bariatric, physically challenged, mentally challenged, or assaulted patients as well as behavioral emergencies. Upon completion, students should be able to recognize and manage the care of patients with special challenges.

EMS-241 **EMS Clinical Practicum IV** 0 0 12 4
Prerequisites: Take EMS-130(S23874) EMS-231(S23880)
Corequisites:
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on mastering the skills/competencies required of the paramedic providing advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic.

EMS-250 **Medical Emergencies** 3 3 0 4
Prerequisites: Take EMS-122(S23872) EMS-130(S23874)
Corequisites:
This course provides an in-depth study of medical conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include appropriate interventions/treatments for disorders/diseases/injuries affecting the following systems: respiratory, neurological, abdominal/gastrointestinal, endocrine, genitourinary, musculoskeletal, and immunological as well as toxicology, infectious diseases and diseases of the eyes, ears, nose and throat. Upon completion, students should be able to recognize, assess and manage the care of frequently encountered medical conditions based upon initial patient assessment.

EMS-260 **Trauma Emergencies** 1 3 0 2
Prerequisites: Take EMS-122(S23872) EMS-130(S23874)
Corequisites:
This course provides in-depth study of trauma including pharmacological interventions for conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include an overview of thoracic, abdominal, genitourinary, orthopedic, neurological, and multi-system trauma, soft tissue trauma of the head, neck, and face as well as environmental emergencies. Upon completion, students should be able to recognize and manage trauma situations based upon patient assessment and should adhere to standards of care.

EMS-270 **Life Span Emergencies** 2 3 0 3
Prerequisites: Take EMS-122(S23872) EMS-130(S23874)
Corequisites:
This course covers medical/ethical/legal issues and the spectrum of age-specific emergencies from conception through death required for paramedic certification. Topics include gynecological, obstetrical, neonatal, pediatric, and geriatric emergencies and pharmacological therapeutics. Upon completion, students should be able to recognize and treat age-specific emergencies.

EMS-285 **EMS Capstone** 1 3 0 2
Prerequisites: Take EMS-220(S16342) EMS-250(S11267) EMS-260(S10208)
Corequisites:
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)

ENG-070 **Basic Language Skills** 2 2 0 3
Prerequisites:
Corequisites:
This course introduces the fundamentals of standard written English. Emphasis is placed on effective word choice, recognition of sentences and sentence parts, and basic usage. Upon completion, students should be able to generate sentences that clearly express ideas.

ENG-080 **Writing Foundations** 3 2 0 4
Prerequisites: Take ENG-070(S16349) or ENG-075
Corequisites:
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.

ENG-090 **Composition Strategies** 3 0 0 3
Prerequisites: Take ENG-080 or ENG-085
Corequisites: ENG-090A
This course provides practice in the writing process and stresses effective paragraphs. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay.

ENG-090A **Composition Strategies Lab** 0 2 0 1
Prerequisites: Take ENG-080 or ENG-085;
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: Take DRE-097(S23642)
Corequisites:
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-110 Freshman Composition 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-080; #Take DRE-097(S23642);Take 1 group;
Corequisites:
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 Writing and Inquiry 3 0 0 3
Prerequisites: Take 1 group; #Take DRE-098(S23643); #Take ENG-090 RED-090; #Take ENG-095
Corequisites:
This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English.

ENG-111A Writing and Inquiry Lab 0 2 0 1
Prerequisites: Take DRE-098(S23643)
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 Writing and Research in the Disciplines 3 0 0 3
Prerequisites: Take ENG-111(S24022)
Corequisites:
This course, the second in a series of two, introduces research techniques, documentation styles, and writing strategies. Emphasis is placed on analyzing information and ideas and incorporating research findings into documented writing and research projects. Upon completion, students should be able to evaluate and synthesize information from primary and secondary sources using documentation appropriate to various disciplines.

ENG-113 Literature-Based Research 3 0 0 3
Prerequisites: Take ENG-111(S13673); Minimum grade C;
Corequisites:
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.

ENG-114 Professional Research & Reporting 3 0 0 3
Prerequisites: Take ENG-111(S13673); Minimum grade C;
Corequisites:
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.

ENG-125 Creative Writing I 3 0 0 3
Prerequisites: Take ENG-111(S13673)
Corequisites:
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: Take ENG-125(S16350)
Corequisites:
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.

ENG-231 American Literature I 3 0 0 3
Prerequisites: Take ENG-112(S24024) ENG-113 or ENG-114(S13706)
Corequisites:
This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts.

ENG-232 American Literature II 3 0 0 3
Prerequisites: Take ENG-112(S24024) ENG-113 or ENG-114(S13706)
Corequisites:
This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts.

ENG-234 Modern American Poets 3 0 0 3
Prerequisites: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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 which 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: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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-261 World Literature I 3 0 0 3
Prerequisites: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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-273 African-American Literature 3 0 0 3
Prerequisites: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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: Take ENG-112(S13681) ENG-113 or ENG-114(S13706)
Corequisites:
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)

ENV-110 Environmental Science 3 0 0 3
Prerequisites:
Corequisites:
This course covers fundamental scientific principles and 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-110A Environmental Science Laboratory 0 2 0 1
Prerequisites:
Corequisites: ENV-110
This course provides a laboratory component to complement ENV 110. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental relationships and of contemporary environmental issues.

ENV-112 Environmental Education I 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the student to elements of the NC Environmental Education Plan. Topics will 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 Education II 2 3 0 3
Prerequisites:
Corequisites:
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: Take 1 group; # Take ENV-110(S13454); #Take BIO-140 BIO-140A;
Corequisites:
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-193A Selected Topics in Rural Watershed Pro 2 3 0 3
Prerequisites:
Corequisites:
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.

ENV-210 Management of Waste 3 2 0 4
Prerequisites: Take 1 group; #Take CHM-131 ENV-110(S13454); #Take CHM-131 BIO-140 BIO-140A
Corequisites:
This course examines contemporary environmental issues concerning the disposal of wastes. Topics include problems associated with the disposal of municipal solid waste, low-level radioactive waste, high-level radioactive waste, hazardous waste, and toxic materials. 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: Take 1 group; # Take ENV-110(S13454); #Take BIO-140 BIO-140A; #Take PTC-110
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: Take 1 group; # Take CHM-131 ENV-110(S13454); #Take CHM-131 BIO-140 BIO-140A
Corequisites:
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: Take 1 group; #Take ENV-110(S13454); #Take BIO-111(S13307); #Take BIO-140 BIO-140A
Corequisites:
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: Take 1 group; #Take BIO-111(S13307) ENV-110(S13454); #Take BIO-111(S13307) BIO-140 BIO-140A;
Corequisites:
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: Take 1 group; #Take CHM-131 ENV-110(S13454); #Take CHM-131 BIO-140 BIO-140A
Corequisites:
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: Take 1 group; #Take ENV-110(S13454); #Take BIO-140 BIO-140A;
Corequisites:
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:
Corequisites:
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: Take 1 group; #Take ENV-110(S13454); #Take BIO-140 BIO-140A;
Corequisites:
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 remedication practices. Upon completion, the student should be able to properly sample environmental medica, demonstrate a knowledge of groundwater dynamics, and discuss various remediation approaches.

FIRE PROTECTION (FIP Prefix)

FIP-120 Introduction to Fire Protection 3 0 0 3
Prerequisites:
Corequisites:
This course provides an overview of the development, methods, systems and regulations that apply to the fire protection field. Topics include history, evolution, statistics, suppression, organizations, careers, curriculum, and related subjects. Upon completion, students should be able to demonstrate a broad understanding of the fire protection field.

FIP-124 Fire Prevention & Public Education 3 0 0 3
Prerequisites:
Corequisites:
This course introduces fire prevention concepts as they relate to community and industrial operations referenced in NFPA standard 101. Topics include the development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group.

FIP-128 Detection and Investigation 3 0 0 3
Prerequisites:
Corequisites:
This course covers procedures for determining the origin and cause of accidental and incendiary fires referenced in NFPA standard 921. Topics include collection and preservation of evidence, detection and determination of accelerants, courtroom procedure and testimony, and documentation of the fire scene. Upon completion, students should be able to conduct a competent fire investigation and present those findings to appropriate officials or equivalent.

FIP-132 Building Construction 3 0 0 3
Prerequisites:
Corequisites:
This course covers the principles and practices reference in NFPA standard 220 related to various types of building construction,including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse, and other related topics. Upon completion, students should be able to understand and recognize various types of construction and their positive or negative aspects as related to fire conditions.

FIP-136 Inspections and Codes 3 0 0 3
Prerequisites:
Corequisites:
This course covers the fundamentals of fire and building codes and procedures to conduct an inspection referenced in NFPA standard 1730. Topics include review of fire and building codes, writing inspection reports, identifying hazards, plan reviews, site sketches, and other related topics. Upon completion, students should be able to conduct a fire code compliance inspection and produce a written report.

FIP-144 Sprinklers & Automatic Alarms 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
This course covers fire protection law as referenced in NFPA standard 1. Topics include legal terms, contracts, liability, review of case histories, and other related topics. Upon completion, students should be able to discuss laws, codes, and ordinances as they relate to fire protection.

FIP-156 Computers in Fire Service 1 2 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
This course covers public and private sector OSHA work site requirements referenced in NFPA standard 1250. Emphasis is placed on accident prevention and reporting, personal safety, machine operations, and hazardous material handling. Upon completion, students should be able to analyze and interpret specific OSHA regulations and write workplace policies designed to achieve compliance.

FIP-176 HazMat: Operations 4 0 0 4
Prerequisites:
Corequisites:
This course is designed to increase first responder awareness of the type, nature, physiological effects of, and defensive techniques for mitigation of HazMat incidents. Topics include recognition, identification, regulations and standards, zoning, resource usage, defensive operations, and other related topics. Upon completion, students should be able to recognize and identify the presence of hazardous materials and use proper defensive techniques for incident mitigation.

FIP-220 Fire Fighting Strategies 3 0 0 3
Prerequisites:
Corequisites:
This course provides preparation for command of initial incident operations involving emergencies within both the public and private sector referenced in NFPA standards 1561, 1710, and 1720. Topics include incident management, fire-ground tactics and strategies, incident safety, and command/control of emergency operations. Upon completion, students should be able to describe the initial incident system as it relates to operations involving various emergencies in fire and non-fire situations.

FIP-221 Advanced Fire Fighting Strategies 3 0 0 3
Prerequisites: Take FIP-220(S23898)
Corequisites:
This course covers command-level operations for multi-company/agency operations involving fire and non-fire emergencies. Topics include advanced use of the Incident Command System(ICS), advanced incident analysis, command-level fire operations, and control of both man made and natural major disasters. Upon completion, students should be able to describe proper and accepted systems for the mitigation of emergencies at the level of overall scene command.

FIP-228 Local Government Finance 3 0 0 3
Prerequisites:
Corequisites:
This course introduces local governmental financial principles and practices. Topics include budget preparation and justification, revenue policies, statutory requirements, audits, and the economic climate. Upon completion, students should be able to comprehend the importance of finance as it applies to the operations of a department.

FIP-229 Fire Dynamics and Combustion 3 0 0 3
Prerequisites:
Corequisites:
This course covers the theories and fundamentals of how and why fires start and spread, and how they are safely controlled referenced in NFPA standard 1001. Topics include components of fire, fire sources, fire behavior, properties of combustible solids, classification of hazards, and the use of fire extinguishing agents. Upon completion, students should be able to describe the properties of matter and dynamics of fire, identify fuel sources, and compare suppressants and extinguishment techniques.

FIP-230 Chemistry of Hazardous Materials I 5 0 0 5
Prerequisites:
Corequisites:
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 Distribution 2 2 0 3
Prerequisites: Take MAT-115(S20802) MAT-120(S20803) MAT-121(S20804) MAT-140(S20907) MAT-151(S21171) MAT-161(S20916) MAT-171(S20807) or MAT-175
Corequisites:
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:
Corequisites:
This course covers the four phases of emergency management: mitigation, preparedness, response, and recovery. Topics include organizing for emergency management, coordinating for community resources, public sector liability, and

the roles of government agencies at all levels. Upon completion, students should be able to demonstrate an understanding of comprehensive emergency management and the integrated emergency management system.

FIP-240 Fire Service Supervision 3 0 0 3
Prerequisites:
Corequisites:
This course covers supervisory skills and practices in the fire protection field. Topics include the supervisor's job, supervision skills, the changing work environment, managing change, organizing for results, discipline and grievances, and safety. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of effective fire service supervision, meeting elements of NFPA 1021.

FIP-244 Fire Protection Project 3 0 0 3
Prerequisites:
Corequisites:
This course provides an opportunity to apply knowledge covered in previous courses to employment situations that the fire protection professional will encounter referenced in NFPA standard 1001. 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 Service Personnel Administration 3 0 0 3
Prerequisites:
Corequisites:
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 sould be able to demonstrate knowledge of the personnel function as it relates to managing fire protection.

FIP-256 Municipal Public Relations 3 0 0 3
Prerequisites:
Corequisites:
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 public relations functions of organizations which meet elements of NFPA 1021 for Fire Officer I and II.

FIP-260 Fire Protection Planning 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
This course provides an overview of fire department operative services referenced in NFPA standard 1021. Topics include finance, staffing, equipment, code enforcement,management information, specialized services, legal issues, planning, and other related topics. Upon completion, students should be able to understand concepts and apply fire department management and operations principles.

FIP-277 Fire and Social Behavior 3 0 0 3
Prerequisites:
Corequisites:
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.

FRENCH (FRE Prefix)

FRE-111 Elementary French I 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
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: Take FRE-111; Minimum grade C
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: Take FRE-111
Corequisites:
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: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
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: Take FRE-181; Minimum grade ;
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: Take FRE-112; Minimum grade C
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: Take 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-281 **French Lab 3** 0 2 0 1
Prerequisites: Take FRE-182; Minimum grade C
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: Take 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 TECHNOLOGY (FST Prefix)
(offered only to immured populations)

FST-100 **Introduction to Foodservice** 3 0 0 3
Prerequisites:
Corequisites:
This course is designed to develop an understanding of the foodservice industry, its terminology, mathematics, and measurements. Emphasis is placed on employability skills, vocabulary, and culinary math including fractions, ratio and proportion, and percents. Upon completion, students should be able to identify career paths, convert recipes, and differentiate standard measurements.

FST-101 **Quantity Baking I** 1 4 0 3
Prerequisites:
Corequisites:
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.

FST-102 **Foodservice Skills I** 4 8 0 8
Prerequisites:
Corequisites:
This course introduces the concepts, skills, and techniques for volume food production in an institutional or commercial setting. Emphasis is placed on knife skills, tool and equipment handling, and applying principles of basic hot and cold food preparation. Upon completion, students should be able to demonstrate entry-level skills for foodservice operations.

FST-103 **Foodservice Sanitation** 2 0 0 2
Prerequisites:
Corequisites:
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.

FST-103A **Foodservice Sanitation Lab** 0 2 0 1
Prerequisites:
Corequisites:
This course provides a laboratory experience for enhancing student skills in the basic principles of sanitation and safety in the foodservice industry. Emphasis is placed on the practical experiences that enhance personal hygiene habits, safety regulations, and food handling practices that protect the health of the consumer. Upon completion, students should be able to demonstrate the application of sanitation and safety production procedures in foodservice operations.

GEOLOGY (GEL Prefix)

GEL-111 **Geology** 3 2 0 4
Prerequisites: Take 1 group; #Take ENG-090 MAT-070 RED-090; #Take ENG-111(S24022) MAT-070; #Take MAT-070 DRE-098(S23643); #Take DMA-050 ENG-090 RED-090; #Take DMA-050 ENG-111 (S24022); #Take DMA-050 DRE-098(S23643)
Corequisites:
This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth.

GEL-113 **Historical Geology** 3 2 0 4
Prerequisites: Take GEL-111(S12347) or GEL-120; Minimum grade C;
Corequisites:
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: Take 1 group; #Take ENG-090 MAT-070 RED-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 ENG-090 RED-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
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: Take GEL-111(S12347) GEL-120 or PHS-130; Minimum grade C;
Corequisites:
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)

GEO-111 **World Regional Geography** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643
This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships.

GEO-112 **Cultural Geography** 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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.

GEOGRAPHIC INFORMATION SYSTEMS (GIS Prefix)

GIS-111 Introduction to GIS 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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: Take GIS-111
Corequisites:
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:
Corequisites:
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, the student will be able to operate within a CAD environment.

GIS-161 Introduction to Computers-BASIC and C++ 1 4 0 3
Prerequisites:
Corequisites:
This course introduces the electronic computer and includes a 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 shouldbe able to utilize and depict calculations, decision-making branching and looping functions processing, and top-down programming methodology.

GIS-230 GIS Data Creation 2 2 0 3
Prerequisites:
Corequisites:
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-241 **Cartographic Production** 2 2 0 3
Prerequisites: Take GIS-111
Corequisites:
This course covers the application of computerized cartography, to include the science and art of map design. Topics include the use of maps as an effective medium, efficient map layout and large-scale map production. Upon completion, students should be able to create a variety of map products for an audience or client.

GIS-251 **Computer Graphics/Mapping** 1 2 0 2
Prerequisites:
Corequisites:
This course introduces the various methods and techniques of assisted and generated images. Emphasis is placed upon knowledge 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)

GRA-255 **Image Manipulation I** 1 3 0 2
Prerequisites: Take GRA-151 or GRD-151
Corequisites:
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)

GRD-110 **Typography I** 2 2 0 3
Prerequisites: Take DRE-097(S23642) DMA-030
Corequisites:
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-121 **Drawing Fundamentals I** 1 3 0 2
Prerequisites:
Corequisites:
This course increases observation skills using basic drawing techniques and media in graphic design. Emphasis is placed on developing the use of graphic design principles, media applications, spatial considerations, drawing styles, and approaches. Upon completion, students should be able to show competence and proficiency in finished works.

GRD-131 **Illustration I** 1 3 0 2
Prerequisites: Take ART-131 DES-125 or GRD-121
Corequisites:
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: Take DRE-097(S23642)
Corequisites:
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: Take 1 group; #Take ART-121(S23014) DRE-098(S23643); # Take DES-135 DRE-098(S23643); #Take GRD-141 DRE-098(S23643); Take ART-121(S12130) DES-135 or GRD-141
Corequisites:
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-145 Design Applications I 0 3 0 1
Prerequisites:
Corequisites: GRD-141. GRD-151
This course introduces visual problem solving. Emphasis is placed on application of design principles. Upon completion, students should be able to produce projects utilizing basic design concepts.

GRD-146 Design Applications II 0 3 0 1
Prerequisites: Take GRD-151
Corequisites: GRD-142
This course is designed to provide additional hands-on training in graphic design. Emphasis is placed on producing comprehensive projects utilizing concepts and technologies covered in GRD 141 and GRD 142. Upon completion, students should be able to provide solutions to design problems.

GRD-151 Computer Design Basics 1 4 0 3
Prerequisites: Take DRE-097(S23642) DMA-030
Corequisites:
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 Techniques I 1 4 0 3
Prerequisites: Take GRD-151 DRE-098(S23643)
Corequisites:
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 Techniques II 1 4 0 3
Prerequisites: Take GRD-151 GRD-152
Corequisites:
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-167 Photographic Imaging I 1 4 0 3
Prerequisites:
Corequisites:
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: Take GRD-167
Corequisites:
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-193 Selected Topics in Adv/Graphic Design 2 4 0 3
Prerequisites:
Corequisites:
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.

GRD-230 Technical Illustration 1 3 0 2
Prerequisites: Take 1 group; # Take GRD-152 ART-131; #Take GRD-152 DES-125; #Take GRD-152 GRD-121; Take ART-131 DES-125 or GRD-121
Corequisites:
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-241 Graphic Design III 2 4 0 4
Prerequisites: Take 1 group; #Take DES-136 GRD-110 GRD-151; # Take GRD-142 GRD-110 GRD-151; Take DES-136 or GRD-142
Corequisites:
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: Take GRD-241
Corequisites:
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-246 Design Applications III 0 3 0 1
Prerequisites: Take GRD-110 GRD-152
Corequisites: GRD-241
This course is designed to provide additional hands-on training in graphic design. Emphasis is placed on producing complex design projects utilizing concepts and technologies taught in GRD 241. Upon completion, students should be able to produce complex design projects for reproduction.

GRD-263 Illustrative Imaging 1 4 0 3
Prerequisites: Take GRD-151 or GRA-151
Corequisites:
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: Take 1 group; # Take GRD-151 GRD-152; #Take GRA-151 GRD-152; Take GRD-151 or GRA-151
Corequisites:
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.

GRD-271 **Multimedia Design I** 1 3 0 2
Prerequisites: Take 1 group; #Take GRD-151 WEB-140; #Take GRA-151 WEB-140; Take GRD-151 or GRA-151
Corequisites:
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: Take 1 group; #Take GRD-142 GRD-152 WEB-140; #Take GRD-142 GRD-152 WEB-140; #Take GRD-142 GRA-152 WEB-140;
Corequisites:
This course covers the organization and presentation of a design/advertising or graphic art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

GRD-281 **Design of Advertising** 2 0 0 2
Prerequisites:
Corequisites:
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: Take 1 group; #Take GRD-110 ENG-110(S22173); #Take GRD-110 ENG-111(S13673); #Take GRD-151 ENG-110(S22173); #Take GRD-151 ENG-111(S13673); Take ENG-110(S20133) or ENG-111(S13673)
Corequisites:
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: Take 1 group; # Take GRD-142 GRA-121 GRA-152; # Take GRD-142 GRA-121 GRD-152 ENG-111(S13673); # Take GRD-142 GRA-152; # Take GRD-142 GRA-152 GRD-152 ENG-111(S13673); # Take GRD-142 GRD-152 GRA-152;
Corequisites:
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 Adv & Graphic Design** 1 2 0 2
Prerequisites: Take GRD-152
Corequisites:
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.

GERONTOLOGY (GRO Prefix)

GRO-120 **Gerontology** 3 0 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
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.

HEALTHCARE BUSINESS INFORMATIC (HBI Prefix)

HBI-110 Issues and Trends in Healthcare Business Informatics 3 0 0 3
Prerequisites:
Corequisites:
This course is a survey of current and emerging technology applications and data standards in the healthcare industry. Topics include the history, implementation, use, management, and impact of information technology in healthcare settings. Upon completion, students should have an understanding of the current trends and issues in healthcare informatics.

HBI-113 Survey of Medical Insurance 3 0 0 3
Prerequisites: Take HBI-110
Corequisites:
This course is a survey of the healthcare insurance system. Emphasis is placed on the foundation necessary for understanding the healthcare delivery system, terminology and practices of healthcare insurance, and provider reimbursement. Upon completion, students should have an understanding of healthcare insurance and how outcomes are addressed through healthcare informatics.

HBI-210 Introduction to Health Information Networking 2 3 0 3
Prerequisites:
Corequisites:
This course introduces health information networking. Emphasis is on security and privacy in healthcare, EHR/EMR implementations, designing, securing, and troubleshooting a network to support a medical group. Upon completion, students should be able to design and support healthcare network implementations.

HBI-250 Data Management and Utilization 2 2 0 3
Prerequisites: Take DBA-110 DBA-120 or DBA-210
Corequisites:
This course covers the management and usage of data in healthcare settings according to current practices in healthcare informatics. Topics include data warehousing, data integrity, data security, data mining, and report generating in healthcare settings. Upon completion, students should be able to demonstrate an understanding of using healthcare data to support reporting and decision making in healthcare settings.

HEALTH (HEA Prefix)

HEA-110 Personal Health/Wellness 3 0 0 3
Prerequisites:
Corequisites:
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.

HEA-112 First Aid & CPR 1 2 0 2
Prerequisites:
Corequisites:
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)

HET-110 Diesel Engines 3 9 0 6
Prerequisites:
Corequisites:
This course introduces theory, design, terminology, and operating adjustments for diesel engines. Emphasis is laced 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-112 Diesel Electrical Systems 3 6 0 5
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturere' 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:
Corequisites:
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, refrigeratnt 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 Introduction to Mobile Equipment 1 2 0 2
Prerequisites:
Corequisites:
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-125 Preventive Maintenance 1 3 0 2
Prerequisites:
Corequisites:
This course introduces preventive maintenance practices used on medium and heavy duty vehicles and rolling assemblies. Topics include preventive maintenance schedules, services, DOT rules and regulations, and road ability. Upon completion, students should be able to set up and follow a preventive maintenance schedule as directed by manufacturers.

HET-128 Medium/Heavy Duty Tune Up 1 2 0 2
Prerequisites:
Corequisites:
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 Diesel Fuel and Power System 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the principles of fuel injection and other power systems used in the heavy equipment industry including newer and cleaner technology. Emphasis is placed on test equipment, component functions, safety, and theories of older conventional and newer and cleaner Tier III and Tier IV fuel systems. Upon completion, students should be able to diagnose and service fuel systems and explain proper safety procedures on alternative fuel systems used in heavy equipment industry.

HET-134 Mechanical Fuel Injection 2 2 0 3
Prerequisites:
Corequisites:
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-192A Selected Topics in Heavy Equip & Trans 2 0 0 2
Prerequisites:
Corequisites:
This course provides an opportunity to explore areas of current interest in the 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.

HET-211 Agricultural Harvesting Equipment 2 4 0 4
Prerequisites:
Corequisites:
This course covers the theory, design, principles of operation and adjustment, and troubleshooting and repari 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.

HET-217 Tractor Performance 1 2 0 2
Prerequisites:
Corequisites:
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, student sshould be able to use test equipment to diagnose engines and drive components and adjust tractors to achieve optimum performance.

HET-231 Medium/Heavy Duty Brake Systems 1 3 0 2
Prerequisites:
Corequisites:
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, adust, and repair braking systems on medium and heavy duty vehicles.

HET-232 Medium/Heavy Duty Brake Systems Lab 0 3 0 1
Prerequisites:
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:
Corequisites:
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)

HIS-111 World Civilizations I 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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.

HIS-112 World Civilizations II 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

HIS-121 Western Civilization I 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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.

HIS-122 Western Civilization II 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

HIS-131 American History I 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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.

HIS-162 Women and History 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history.

HIS-167 The Vietnam War 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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.

HIS-216 Twentieth-Century Europe 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

HIS-221 African-American History 3 0 0 3
Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

HIS-222 African-American History I 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

HIS-223 African-American History II 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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.

HIS-226 The Civil War 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War.

HIS-231 Recent American History 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

HIS-236 North Carolina History 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

HEALTH INFORMATION TECHNOLOGY (HIT Prefix)

HIT-226 Principles of Disease 3 0 0 3
Prerequisites: Take BIO-166 or BIO-169(S11629)
Corequisites:
This course covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. Topics include basic microbiology, basic pharmacology, and principles of disease. Upon completion, students should be able to relate disease processes to etiology, physical signs and symptoms, prognosis, and common complications and their management.

HORTICULTURE (HOR Prefix)

HOR-268 Advanced Propagation 3 3 0 4
Prerequisites:
Corequisites:
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)

HPC-140 Introduction to High Performance Computing Architecture 2 2 0 3
Prerequisites: Take CTI-193A
Corequisites:
This course introduces students to hardware architecture for the High Performance Computing environment (HPC). Topics include distributed and shared memory systems, hardware design issues, vector parallel machines and communication issues of remote massively parallel machines and clusters. Upon completion, students should be able to discuss and evaluate architectural design issues in an HPC system.

HPC-150 Hpc Networking Technology 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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 Intro to Hpc Data Mining 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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-230 Adv Hpc Communication 2 2 0 3
Prerequisites:
Corequisites:
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 Adv Hpc Architecture 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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 Adv Hpc Data Mining 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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 Adv Cluster Computing 2 2 0 3
Prerequisites:
Corequisites:
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 **Sys Analysis and Design** 3 0 0 3
Prerequisites:
Corequisites:
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, presentation. Upon completion, students should be able to complete a HPC project.

HOTEL & RESTAURANT MANAGEMENT (HRM Prefix)

HRM-110 **Introduction to Hospitality and Tourism** 3 0 0 3
Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; # Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
This course covers the growth and progress of the hospitality industry. Topics include tourism, lodging, resorts, gaming, restaurants, foodservice and clubs. Upon completion, students should be able to demonstrate an understanding of the background, context, and career opportunities that exist within the hospitality industry.

HRM-120 **Front Office Procedures** 3 0 0 3
Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; # Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
This course introduces a systematic approach to lodging front office procedures. Topics include reservations, registration, guest satisfaction, occupancy and revenue 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: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
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-210 **Meetings and Event Planning** 3 0 0 3
Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)
Corequisites:
This course introduces concepts related to the planning and operation of conventions, trade shows, professional meetings, and foodservice events. Emphasis is placed on methods of marketing, selling, organizing, and producing conventions, events, and trade shows that will increase financial and environmental value. Upon completion, students should be able to demonstrate an understanding of management principles for multi-function, multi-day conferences and events.

HRM-215 **Restaurant Management** 3 0 0 3
Prerequisites: Take 1 group; # Take CUL-135(S10202) CUL-135A(S11193); #Take HRM-124(S21353); Take CUL-135(S22842) or HRM-124(S22904)
Corequisites:
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 and Beverage 3 0 0 3

Prerequisites:

Corequisites:

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 3 0 0 3

Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; # Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)

Corequisites:

This course introduces the management of beverages served in hospitality operations. Topics include history and trends; service, procurement and storage; knowledge and control of wines and fermented/distilled beverages; and non-alcoholic beverages, coffees, and teas. Upon completion, students should be able to demonstrate an understanding of responsible alcohol service and the knowledge of beverages consumed in a hospitality operation.

HRM-240 Marketing for Hospitality 3 0 0 3

Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)

Corequisites:

This course covers planning, organizing, directing, and analyzing the results of marketing programs for the hospitality industry. Emphasis is placed on target marketing, marketing mix, analysis, product and image development, use of current media, sales planning, advertising, public relations, and collateral materials. Upon completion, students should be able to apply the marketing process as it relates to the hospitality industry.

HRM-245 Human Resource Management-Hospitality 3 0 0 3

Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)

Corequisites:

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 Hospitality 3 0 0 3

Prerequisites: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)

Corequisites:

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: Take 1 group; #Take MAT-070 RED-090 ENG-090; #Take ENG-111(S13673) MAT-070; #Take DMA-040 RED-090 ENG-090; #Take DMA-040 ENG-111(S13673)

Corequisites:

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 **Management Problems-Hospitality** 3 0 0 3
Prerequisites: Take HRM-110(S22898)
Corequisites:
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.

HUMAN SCIENCES (HSC Prefix)

HSC-120 **CPR** 0 2 0 1
Prerequisites:
Corequisites:
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)

HSE-110 **Introduction to Human Services** 2 2 0 3
Prerequisites:
Corequisites: HSE-135
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: Take 1 group; #Take DRE-098(S23643); #Take RED-090 ENG-090; # Take ENG-111(S24022)
Corequisites:
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-123 **Interviewing Techniques** 2 2 0 3
Prerequisites: Take DRE-098(S23643) HSE-110
Corequisites:
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-125 **Counseling** 2 2 0 3
Prerequisites: Take DRE-098(S23643) HSE-110
Corequisites:
This course covers the major approaches to psychotherapy and counseling, including theory, characteristics, and techniques. Emphasis is placed on facilitation of self-exploration, problem solving, decision making, and personal growth. Upon completion, students should be able to understand various theories of counseling and demonstrate counseling techniques.

HSE-127 **Conflict Resolution** 2 2 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
This course introduces conflict resolution and mediation theory and practice. Emphasis is placed on achieving

compromise and a win/win perception. Upon completion, students should be able to demonstrate competence in identifying seemingly dissimilar positions and facilitating agreement.

HSE-135 Orientation Lab I 0 2 0 1
Prerequisites:
Corequisites:
This course is designed to promote professional, program, and personal identification with the human services field. Emphasis is placed on interpersonal communication, verbal and non-verbal interactions, and team building. Upon completion, students should be able to identify with the human services profession and demonstrate basic team-building skills.

HSE-145 Child Abuse & Neglect 3 0 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
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: Take DRE-098(S23643
Corequisites:
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-212 Group Process II 1 2 0 2
Prerequisites: Take HSE-112
Corequisites:
This course is a continuation of the study of 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 demonstrate their ability to communicate with others and facilitate communications between others.

HSE-220 Case Management 2 2 0 3
Prerequisites: Take HSE-110 DMA-010 DMA-020 DMA-030 DMA-040 DMA-050
Corequisites:
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: Take 1 group; #Take DRE-098(S23643); #Take RED-090 ENG-090; #Take ENG-111(S24022)
Corequisites:
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-227 Children & Adolescents in Crisis 3 0 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
This course covers the crises affecting children and adolescents in contemporary society. Emphasis is placed on abuse and neglect, suicide and murder, dysfunctional family living, poverty, and violence. Upon completion, students should be able to identify and discuss intervention strategies and available services for the major contemporary crises affecting children and adolescents.

HSE-245 **Stress Management** 2 2 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
This course covers stressors and techniques for stress management. Topics include anger, assertiveness, breathing, change, coping skills, family, time management, meditation, guided imagery, and journaling. Upon completion, students should be able to identify areas of stress and the skills and management techniques for dealing with stressors.

HSE-251 **Activities Planning** 2 2 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
This course introduces skills and techniques used in recreation and leisure activities to enhance the lives of special populations. Emphasis is placed on music, art, and recreational activities. Upon completion, students should be able to define, plan, and adapt recreational activities for selected groups and individuals to maintain quality of life.

HUMANITIES (HUM Prefix)

HUM-110 **Technology and Society** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course considers technological change from historical, artistic, and philosophical perspectives and its effect on human needs and concerns. Emphasis is placed on the causes and consequences of technological change. Upon completion, students should be able to critically evaluate the implications of technology.

HUM-115 **Critical Thinking** 3 0 0 3
Prerequisites: Take 1 group; #Take DRE-098(S23643); # Take ENG-095; #Take RED-090 ENG-090
Corequisites:
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.

HUM-121 **The Nature of America** 3 0 0 3
Prerequisites:
Corequisites:
This course provides an interdisciplinary survey of the American cultural, social, and political experience. Emphasis is placed on the multicultural character of American society, distinctive qualities of various regions, and the American political system. Upon completion, students should be able to analyze significant cultural, social, and political aspects of American life.

HUM-130 **Myth in Human Culture** 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course provides an in-depth study of myths and legends. Topics include the varied sources of myths and their influence on the individual and society within diverse cultural contexts. Upon completion, students should be able to demonstrate a general familiarity with myths and a broad-based understanding of the influence of myths and legends on modern culture.

HUM-160 **Introduction to Film** 2 2 0 3
Prerequisites: Take ENG-111(S13673)
Corequisites:
This course introduces the fundamental elements of film artistry and production. Topics include film styles, history, and production techniques, as well as the social values reflected in film art. Upon completion, students should be able to critically analyze the elements covered in relation to selected films.

HUM-161 Advanced Film Studies 2 2 0 3
Prerequisites: Take HUM-160(S16395)
Corequisites:
This course provides an advanced study of film art and production, building on skills learned in HUM 160. Topics include advanced film production techniques, film genres, examination of master directors' styles, and the relation of film to culture. Upon completion, students should be able to recognize and critically analyze advanced elements of film production.

HUM-170 The Holocaust 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course provides a survey of the destruction of European Jewry by the Nazis during World War II. Topics include the anti-Semitic ideology, bureaucratic structures, and varying conditions of European occupation and domination under the Third Reich. Upon completion, students should be able to demonstrate an understanding of the historical, social, religious, political, and economic factors which cumulatively resulted in the Holocaust.

HUM-211 Humanities I 3 0 0 3
Prerequisites: Take ENG-111(S13673)
Corequisites:
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.

HUM-212 Humanities II 3 0 0 3
Prerequisites: Take ENG-111(S13673
Corequisites:
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.

HUM-220 Human Values and Meaning 3 0 0 3
Prerequisites: Take ENG-111(S13673)
Corequisites:
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.

HUM-230 Leadership Development 3 0 0 3
Prerequisites: Take ENG-111(S13673)
Corequisites:
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.

HYDRAULICS AND PNUEMATICS (HYD Prefix)

HYD-110 Hydraulics/Pneumatics I 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control

devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting.

HYD-111 Mobile Hydraulic Systems 1 4 0 3
Prerequisites:
Corequisites:
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-Medium and Heavy Duty 1 2 0 2
Prerequisites:
Corequisites:
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 Hydaulic/Hydrostatic Construction 2 4 0 4
Prerequisites:
Corequisites:
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)

IMG-110 Fundamentals of Imaging I 2 0 6 4
Prerequisites:
Corequisites:
This course provides an overview of the principles of imaging for radiography, nuclear medicine, ultrasound, and radiation therapy. Emphasis is placed on image production and anatomical relationships in radiography, nuclear medicine, ultrasound, and radiation therapy. Upon completion, students should be able to identify basic anatomy on, and differentiate between, radiography, nuclear medicine, radiation therapy, and ultrasound images.

IMG-111 Fundamentals of Imaging II 2 0 6 4
Prerequisites: Take IMG-110
Corequisites:
This course provides an overview of the principles of imaging for CT, PET, CT/PET and MRI. Emphasis is placed on image production and anatomical relationships in CT, PET, CT/PET, and MRI. Upon completion, students should be able to identify basic anatomy on, and differentiate between, CT, PET, CT/PET, and MRI images.

IMG-120 Patient Care Medical Imaging 1 2 0 2
Prerequisites:
Corequisites:
This course is designed to provide the basic concepts of patient care in a healthcare facility. Topics include routine and emergent patient care procedures, infection control procedures, and usage of universal precautions. Upon completion, students should be able to demonstrate competence in these areas.

IMG-130 Imaging Ethics & Law 3 0 0 3
Prerequisites:
Corequisites:
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)

INT-110 International Business 3 0 0 3
Prerequisites:
Corequisites:
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)

ISC-112 Industrial Safety 2 0 0 2
Prerequisites:
Corequisites:
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.

ISC-112 Industrial Safety 2 0 0 2
Prerequisites:
Corequisites:
This course introduces the principles of industrial safety. Emphasis is placed on industrial safety and OSHA regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance.

ISC-115 Construction Safety 2 0 0 2
Prerequisites:
Corequisites:
This course introduces the basic concepts of construction site safety. Topics include ladders, lifting, lock-out/tag-out, personal protective devices, scaffolds, and above/below ground work based on OSHA regulations. Upon completion, students should be able to demonstrate knowledge of applicable safety regulations and safely participate in construction projects.

ISC-121 Environmental Health & Safety 3 0 0 3
Prerequisites:
Corequisites:
This course covers workplace environmental, health, and safety concepts. Emphasis is placed on managing the implementation and enforcement of environmental health and safety regulations and on preventing accidents, injuries, and illnesses. Upon completion, students should be able to demonstrate an understanding of basic concepts of environmental health and safety.

ISC-128 Industrial Leadership 2 0 0 2
Prerequisites:
Corequisites:
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: Take EGR-115(S20666)
Corequisites:
This course introduces quality concepts and techniques used in industry. Topics include elementary statistics and probability, process control, process capability, and quality improvement tools. Upon completion, students should be able to demonstrate an understanding of the concepts and principles of quality and apply them to the work environment.

ISC-135 Principles of Industrial Management 4 0 0 4
Prerequisites:
Corequisites:
This course covers the managerial principles and practices required for organizations to succeed in modern industry, including quality and productivity improvement. Topics include the functions and roles of all levels of the management, organization design, planning and control of manufacturing operation, managing conflict, group dynamics, and problem solving skills. Upon completion, students should be able to demonstrate an understanding of management principles and integrate these principles into job situations.

ISC-136 Productivity Analysis I 2 3 0 3
Prerequisites:
Corequisites:
This course covers modern methods of measuring, analyzing, and improving productivity. Topics include methods analysis, standardized practices, process analysis, and human factors. Upon completion, students should be able to apply productivity improvement techniques.

ISC-175 QA Fundamentals 1 0 0 1
Prerequisites:
Corequisites:
This course is designed to increase fundamental knowledge in the philosophies, principles, and practice of quality in the work environment. Topics include the history and basics of quality, philosophies of quality, daily application of principles, and roles of quality professions, with emphasis on cGMP environment. Upon completion, students should be able to discuss quality fundamentals, components of quality systems, and identify standards and programs of quality.

ISC-221 Statistical Quality Control 3 0 0 3
Prerequisites:
Corequisites:
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: Take ISC-136(S20651) ISC-243(S20653)
Corequisites:
This course introduces the methods and principles used to design an 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:
Corequisites:
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:
Corequisites:
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: Take 1 group; #Take DFT-110; #Take DFT-151; #Take ARC-114(S10248)
Corequisites:
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: Take ISC-243(S10640)
Corequisites:
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:
Corequisites:
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:
Corequisites:
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 be able to demonstrate the basic knowledge required to take the ASQC Certified Quality Technician Exam.

ISC-278 cGMP Quality Systems 2 0 0 2
Prerequisites:
Corequisites:
This course focuses on the development, implementation, and ongoing maintenance of a quality system in a cGMP environment. Topics include the cGMP standard, components of cGMP quality systems, quality function roles and training, development of documentation such as SOPs, and system review procedures. Upon completion, students should be able to identify the components of a quality system and develop a quality system manual utilizing the cGMP standard.

ISC-280 Validation Fundamentals 1 2 0 2
Prerequisites:
Corequisites:
This course covers the fundamental concepts of components of a validation program in a cGMP environment. Emphasis is placed on FDA requirements concerning validation, types of validation, documentation, procedures, and the QA role. Upon completion, students should be able to discuss the purpose of validation, identify the steps in the validation process, and effectively utilize sample documentation.

JOURNALISM (JOU Prefix)

JOU-110 Introduction to Journalism 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673)
Corequisites:
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.

LANDSCAPE ARCHITECTURE (LAR Prefix)

LAR-111 Introduction to Landscape Architecture Technology 1 6 0 3
Prerequisites:
Corequisites:
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 & Methods 3 2 0 4
Prerequisites:
Corequisites:
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: Take LAR-111(S10088)
Corequisites:
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-120 Sustainable Development 2 2 0 3
Prerequisites:
Corequisites:
This course introduces students to sustainable practices in site design and land development. Topics include conservation subdivision design, transportation issues, urban planning, water conservation, rain gardens, alternative technologies, permaculture design, low impact design, and grey water systems. Upon completion, students should be able to demonstrate techniques and procedures used for mitigating the impact of development on the environment.

LAR-193 Selected Topics in Landscape Arch 2 2 0 3
Prerequisites:
Corequisites:
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.

LAR-211 Commercial Site Design 1 6 0 3
Prerequisites: Take LAR-113(S10075)
Corequisites:
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: Take ARC-114(S10248) LAR-211(S22167)
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 Principles of Exterior Planting 3 3 0 4
Prerequisites:
Corequisites:
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 Interior Planting 2 3 0 3
Prerequisites:
Corequisites:
This course covers the identification, selection, and installation of interior landscape plants. Topics include interior plant selection, fertilization, pruning, pest and disease identification and control, and other related topics. Upon completion, students should be able to select plants for interior settings.

LAR-235 Landscape Architectural Presentation Techniques 2 3 0 3
Prerequisites:
Corequisites:
This course covers landscape architectural presentation techniques. Topics include perspective drawing, shadow projection, texturization, rendered landscape architecture plans, and other related topics. Upon completion, students should be able to present ideas graphically and render landscape presentation drawings.

LAR-241 Advanced Site Planning 2 3 0 3
Prerequisites: Take ARC-240(S21519)
Corequisites:
This course covers advanced site planning. Topics include grading complex sites, erosion control, soil volume calculations, storm water volume calculations, channel sizing and other related topics. Upon completion, students should be able to perform advanced grading and site planning calculations.

LAR-242 Planning & Environment 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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.

LASERS AND OPTICS (LEO Prefix)

LEO-223 Fiber Optics 3 3 0 4
Prerequisites: Take ELN-132(S14036) ELN-133(S14003)
Corequisites:
This course covers the principles of fiber optics, particularly as a communications transmission medium. Topics include digital communications systems, optical fibers, cables, splices, connectors, optical transmitters and receivers, installation techniques, component testing, and system testing. Upon completion, students should be able to splice and connectorize a fiber, make measurements of fiber optic systems, and test and troubleshoot fiber optic components and systems.

LOGISTICS MANAGEMENT (LOG Prefix)

LOG-110 Introduction to Logistics 3 0 0 3
Prerequisites:
Corequisites:
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.

LOG-125 Transportation Logistics 3 0 0 3
Prerequisites:
Corequisites:
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: Take LOG-110
Corequisites:
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: Take LOG-110
Corequisites:
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: Take LOG-215
Corequisites:
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: Take LOG-125(S21720)
Corequisites:
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: Take LOG-110
Corequisites:
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: Take LOG-110
Corequisites:
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: Take LOG-125(S13306)
Corequisites:
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)

MAC-111 Machining Technology I 2 12 0 6
Prerequisites:
Corequisites:
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 1 6 0 3
Prerequisites:
Corequisites:
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-111B Machining Technology I 1 6 0 3
Prerequisites: Take MAC-111A
Corequisites:
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-121 Introduction to CNC 2 0 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
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.

MATHEMATICS (MAT Prefix)

MAT-001 Math Skills Support 0 2 0 1
Prerequisites:
Corequisites:
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.

MAT-050 Basic Math Skills 3 2 0 4
Prerequisites:
Corequisites:
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-110 Mathematical Measurement and Literacy 2 2 0 3
Prerequisites: Take DMA-010 DMA-020 DMA-030
Corequisites:
This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.

MAT-115 Mathematical Models 2 2 0 3
Prerequisites: Take 1 group; #Take MAT-060 MAT-070; #Take MAT-060 MAT-080; # Take MAT-060 MAT-090; #Take MAT-095; #Take MAT-120(S20803); #Take MAT-121(S20804); # Take MAT-161(S20916); #Take MAT-171(S20807);
Corequisites:
This course develops the ability to utilize mathematical skills and technology to solve problems at a level found in non-mathematics-intensive programs. Topics include applications to percent, ratio and proportion, formulas, statistics, function notation, linear functions, probability, sampling techniques, scatter plots, and modeling. Upon completion, students should be able to solve practical problems, reason and communicate with mathematics, and work confidently, collaboratively, and independently.

MAT-121 Algebra/Trigonometry I 2 2 0 3
Prerequisites: Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060(S23172)
Corequisites:
This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

MAT-122 Algebra/Trigonometry II 2 2 0 3
Prerequisites: Take MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-175
Corequisites:
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: Take 1 group; #Take MAT-070 MAT-060; #Take MAT-080 MAT-060; # Take MAT-090 MAT-060; #Take MAT-095; #Take MAT-120(S20803); #Take MAT-121(S20804); # Take MAT-161(S20916); #Take MAT-171(S20807);
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: Take 1 group; #Take MAT-070 MAT-060; #Take MAT-080 MAT-060; # Take MAT-090 MAT-060; #Take MAT-095; #Take MAT-120(S20803); # Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171(S20807);
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: Take 1 group; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-095; #Take MAT-120(S20803); #Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171(S20807); #Take MAT-175;
Corequisites: MAT-141A
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.

MAT-141A Mathematical Concepts I Lab 0 2 0 1
Prerequisites: Take 1 group; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-095; # Take MAT-120(S20803); #Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171(S20807); #Take MAT-175
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.

MAT-142 Mathematical Concepts II 3 0 0 3
Prerequisites: Take MAT-141(S13022)
Corequisites: MAT-142A
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.

MAT-142A **Mathematical Concepts II Lab** 0 2 0 1
Prerequisites: Take MAT-141(S13022);Take MAT-141(S13022);
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.

MAT-143 **Quantitative Literacy** 2 2 0 3
Prerequisites: Take 1 group; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DRE-098(S23643); #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 ENG-095; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 ENG-090 RED-090
Corequisites:
This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life.

MAT-151 **Statistics I** 3 0 0 3
Prerequisites: Take 1 group; # Take MAT-080 MAT-060; Minimum grade C; #Take MAT-090 MAT-060; Minimum grade C; #Take MAT-095; Minimum grade C; #Take MAT-120(S20803); Minimum grade C; #Take MAT-121(S20804); Minimum grade C
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.

MAT-151A **Statistics I Lab** 0 2 0 1
Prerequisites: Take 1 group; #Take MAT-080 MAT-060; Minimum grade C; #Take MAT-090 MAT-060; Minimum grade C; #Take MAT-095; Minimum grade C; #Take MAT-120(S20803); Minimum grade C; #Take MAT-121(S20804); Minimum grade C
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.

MAT-152 **Statistical Methods I** 3 2 0 4
Prerequisites: Take 1 group; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DRE-098(S23643); #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 ENG-095; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 ENG-090 RED-090
Corequisites:
This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results.

MAT-155 **Statistical Analysis** 3 0 0 3
Prerequisites: Take 1 group; #Take MAT-080 MAT-060; # Take MAT-090 MAT-060; #Take MAT-095; #Take MAT-120(S20803); #Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171 (S20807); # Take MAT-175; #Take DMA-010, DMA-020, DMA-030, DMA-040, and DMA-050
Corequisites: MAT-155A

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: Take 1 group; #Take MAT-080 MAT-060; # Take MAT-090 MAT-060; #Take MAT-095; #Take MAT-120(S20803); #Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171 (S20807); # Take MAT-175; #Take DMA-010, DMA-020, DMA-030, DMA-040, and DMA-050
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: Take 1 group; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060(S23172) DMA-070(S23173) DMA-080(S23174); #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-065
Corequisites: MAT-161A
This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed on applications involving equations and inequalities; polynomial, 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: Take 1 group; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060(S23172) DMA-070(S23173) DMA-080(S23174); #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-065
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: Take MAT-161(S20916) MAT-171(S20807) or MAT-175
Corequisites: MAT-165A
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: Take MAT-161(S20916) MAT-171(S20807) or MAT-175
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: Take MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-280(S12063)
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: Take MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-280(S12063)
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 **Precalculus Algebra** 3 2 0 4
Prerequisites: Take 1 group; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060(S23172) DMA-070(S23173) DMA-080(S23174); #Take MAT-121(S23927); #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-065
Corequisites:
This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra-related problems with and without technology.

MAT-171A **Precalculus Algebra Lab** 0 2 0 1
Prerequisites: Take 1 group; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; # Take MAT-095; # Take MAT-161(S20916); #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060(S23172) DMA-070(S23173) DMA-080(S23174)
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.

MAT-172 **Precalculus Trigonometry** 3 2 0 4
Prerequisites: Take MAT-171(S23934)
Corequisites:
This course is designed to develop an understanding of topics which are fundamental to the study of Calculus. Emphasis is placed on the analysis of trigonometric functions in multiple representations, right and oblique triangles, vectors, polar coordinates, conic sections, and parametric equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to trigonometry-related problems with and without technology.

MAT-172A **Precalculus Trigonometry Lab** 0 2 0 1
Prerequisites: Take MAT-171(S11257); Minimum grade C;
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:
Corequisites: MAT-175A
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:
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: Take MAT-122(S16423)
Corequisites:
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 2 0 4
Prerequisites: Take MAT-171(S23934)
Corequisites:
This course is designed to introduce concepts of differentiation and integration and their applications to solving problems. Topics include graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results.

MAT-263A Brief Calculus Lab 0 2 0 1
Prerequisites: Take MAT-161(S20916) MAT-171(S20807) or MAT-175; Minimum grade C
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: Take MAT-172(S23935)
Corequisites:
This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative-related problems with and without technology.

MAT-272 Calculus II 3 2 0 4
Prerequisites: Take MAT-271(S23939)
Corequisites:
This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology.

MAT-273 Calculus III 3 2 0 4
Prerequisites: Take MAT-272(S23940)
Corequisites:
This course is designed to develop the topics of multivariate calculus. Emphasis is placed on multivariate functions, partial derivatives, multiple integration, solid analytical geometry, vector valued functions, and line and surface integrals. Upon completion, students should be able to select and use appropriate models and techniques for finding the solution to multivariate-related problems with and without technology.

MAT-280 Linear Algebra 2 2 0 3
Prerequisites: Take MAT-271(S23939)
Corequisites:
This course provides an introduction to linear algebra topics. Emphasis is placed on the development of abstract concepts and applications for vectors, systems of equations, matrices, determinants, vector spaces, multi-dimensional linear transformations, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to linear algebra-related problems with and without technology.

MAT-285 **Differential Equations** 2 2 0 3
Prerequisites: Take MAT-272(S13612)
Corequisites:
This course provides an introduction to topics involving ordinary differential equations. Emphasis is placed on the development of abstract concepts and applications for first-order and linear higher-order differential equations, systems of differential equations, numerical methods, series solutions, eigenvalues and eigenvectors, and LaPlace transforms. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to differential equations-related problems with and without technology.

MECHANICAL (MEC Prefix)

MEC-111 **Machine Processes I** 1 4 0 3
Prerequisites:
Corequisites:
This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to manufacture simple parts to specified tolerance.

MEC-130 **Mechanisms** 2 2 0 3
Prerequisites: Take 1 group; # Take MAT-121(S20804) DFT-110; #Take MAT-121(S20804) DFT-151; #Take MAT-121(S20804) ARC-114(S10248); #Take MAT-161(S20916) DFT-110; #Take MAT-161(S20916) DFT-151; #Take MAT-161(S20916) ARC-114(S10248)
Corequisites:
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-141 **Introduction to Manufacturing Processes** 2 2 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
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-161 **Manufacturing Processes I** 3 0 0 3
Prerequisites:
Corequisites:
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:
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:
Corequisites:
This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre- and post-manufactufing processes, and material selection of ferrous and non-ferrous metals, plastics, composities, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications.

MEC-180 Engineering Materials 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre- and post-manufactufing processes, and material selection of ferrous and non-ferrous metals, plastics, composities, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications.

MEC-260 Fundamentals of Machine Design 2 3 0 3
Prerequisites: Take MAT-121(S20804) MAT-161(S20916) or MAT-171(S20807)
Corequisites:
This course introduces the fundamental principles of machine design. Topics include simple analysis of forces, moments, stresses, strains, friction, kinematics, and other considerations for designing machine elements. Upon completion, students should be able to analyze machine components and make component selections from manufacturers' catalogs.

MEC-265 Fluid Mechanics 2 2 0 3
Prerequisites:
Corequisites:
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-265 Fluid Mechanics 2 2 0 3
Prerequisites: Take MAT-121(S20804) MAT-161(S20916) or MAT-171(S20807)
Corequisites:
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: Take 1 group; #Take MAT-121(S20804) PHY-131(S20809); #Take MAT-121(S20804) PHY-151(S20924); # Take MAT-161(S20916) PHY-131(S20809); #Take MAT-161(S20916) PHY-151(S20924); # Take MAT-171(S20807) PHY-131(S20809);
Corequisites:
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.

MEDICAL ASSISTING (MED Prefix)

MED-110 Orientation to Medical Assisting 1 0 0 1
Prerequisites:
Corequisites:
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.

MED-118 Medical Law and Ethics 2 0 0 2
Prerequisites:
Corequisites:
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.

MED-120 Survey of Medical Terminology 2 0 0 2
Prerequisites:
Corequisites:
This course introduces the vocabulary, abbreviations, and symbols used in the language of medicine. Emphasis is placed on building medical terms using prefixes, suffixes, and word roots. Upon completion, students should be able to pronounce, spell, and define accepted medical terms.

MED-121 Medical Terminology I 3 0 0 3
Prerequisites:
Corequisites:
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.

MED-122 Medical Terminology II 3 0 0 3
Prerequisites: Take MED-121
Corequisites:
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.

MED-130 Administrative Office Procedures I 1 2 0 2
Prerequisites:
Corequisites:
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 Administrative Office Procedures II 1 2 0 2
Prerequisites: Take MED-130
Corequisites:
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:
Corequisites:
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, and applicable North Carolina laws. Upon completion, students should be able to demonstrate an understanding of infectious diseases, disease transmission, infection control procedures, biohazard management, OSH standards, and applicable North Carolina laws.

MED-140 Examining Room Procedures I 3 4 0 5
Prerequisites: Take BIO-161 ENG-111(S13673) MAT-110(S20801) MED-110 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: Take BIO-161 ENG-111(S13673) MAT-110(S20801) MED-110 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-183 Electronic Medical Records I 3 2 3 5
Prerequisites:
Corequisites:
This course introduces students to the design and creation of Electronic Methods Records using a variety of EMR models. Topics include historial background of electronic medical records, legal/ethical principles inherent to healthcare information, patient flow, scheduling, call processing and tasking using the EMR. Upon completion, students should be able to discuss the history of EMR, identify emerging issues, apply ethical principles, and use basic modules of an EMR.

MED-232 Medical Insurance Coding 1 3 0 2
Prerequisites: Take MED-130 MED-131(S16431)
Corequisites:
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 Practicum 0 0 15 5
Prerequisites: Take MED-140 MED-150
Corequisites:
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-264 Medical Assisting Overview 2 0 0 2
Prerequisites: Take MED-140 MED-150
Corequisites:
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: Take 1 group; #Take MED-122 BIO-161; #Take MED-122 BIO-163
Corequisites:
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: Take MED-140 MED-150
Corequisites:
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-274 Diet Therapy/Nutrition 3 0 0 3
Prerequisites: Take MED-122
Corequisites:
This course introduces the basic principles of nutrition as they relate to health and disease. Topics include basic nutrients, physiology, dietary deficiencies, weight management, and therapeutic nutrition in wellness and disease. Upon completion, students should be able to interpret clinical and dietary data and provide patient counseling and education.

MED-276 Patient Education 1 2 0 2
Prerequisites: Take MED-140 MED-150
Corequisites:
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)

MKT-120 Principles of Marketing 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
This course covers the basic concepts of international marketing activity and theory. Topics include product promotion, placement, and pricing strategies in the international marketing environment. Upon completion, students should be able to demonstrate a basic understanding of the concepts covered.

MKT-232 Social Media Marketing 3 2 0 4
Prerequisites:
Corequisites:
This course is designed to build students' social media marketing skills by utilizing projects that give students hands on experience implementing social media marketing strategies. Topics include integrating different social media technologies into a marketing plan, creating social media marketing campaigns, and applying appropriate social media tools. Upon completion, students should be able to use social media technologies to create and improve marketing efforts for businesses.

MEDICAL LABORATORY TECHNOLOGY (MLT Prefix)

MLT-110 Introduction to Mlt 2 3 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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: Take BIO-163 MLT-110 MLT-111 MLT-115 MLT-118 MLT-140
Corequisites:
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: Take BIO-163 MLT-110 MLT-111 MLT-115 MLT-118 MLT-140;
Corequisites:
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: Take BIO-163 MLT-110 MLT-111 MLT-115 MLT-118 MLT-140
Corequisites:
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 Introduction to Microbiology 2 3 0 3
Prerequisites:
Corequisites:
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: Take MLT-230 MLT-266 MLT-280
Corequisites:
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: Take MLT-120 MLT-125 MLT-130 MLT-240
Corequisites:
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: Take MLT-220 MLT-254 MLT-130; Take MLT-130
Corequisites:
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 Clinical Microbiology** 2 3 0 3
Prerequisites: Take BIO-163 MLT-110 MLT-111 MLT-115 MLT-118 MLT-140
Corequisites:
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: Take MLT-120 MLT-125 MLT-130 MLT-240
Corequisites:
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: Take MLT-220 MLT-254
Corequisites:
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: Take MLT-230 MLT-266 MLT-280
Corequisites:
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: Take MLT-220 MLT-254;
Corequisites:
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)

MRI-213 **MR Patient Care & Safety** 2 0 0 2
Prerequisites:
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:
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: Take 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:
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: Take 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: Take 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 & Pathology I 2 0 0 2
Prerequisites:
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 & Pathology II 2 0 0 2
Prerequisites: Take 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:
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: Take 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: Take 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:
Corequisites:
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)

MSI-110 Military Science I 1 0 0 1
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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)

MTH-110 Fundamentals of Massage 6 9 3 10
Prerequisites:
Corequisites: BIO-163 ACA-111
This course introduces concepts basic to the role of the massage therapist in a variety of clinical settings. 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: Take BIO-163 MTH-110(S22033); Take MTH-110(S22033)
Corequisites:
This course provides an expanded knowledge and skill base for the massage therapist in a variety of clinical settings. 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:
Corequisites: MTH-125 MTH-210 MTH-220 MTH-110 MTH-120
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: Take MTH-120(S20861)
Corequisites:
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 of this course the student should be able to discuss issues relating to the practice of massage therapy, client/therapist relationships as well as ethical issues.

MTH-130 Therapeutic Massage Management 2 0 0 2
Prerequisites: Take MTH-110(S22033)
Corequisites:
This course introduces the basic responsibilities in the development and administration of a professional massage therapy practice. Emphasis is placed on identifying successful practice management methods such as selecting a business structure, negotiating a contract/lease, developing a business/marketing plan, designing a massage space, differentiating spa from clinical practice, management of client/financial records and physician referral. Upon completion, students should be able to demonstrate the knowledge and skills necessary to develop and manage a massage therapy practice.

MTH-210 Advanced Skills of Massage 4 9 3 8
Prerequisites: Take MTH-120(S22036) or MTH-121
Corequisites:
This course provides knowledge and skills in diverse body work modalities in a variety of clinical settings. Emphasis is placed on selected techniques such as Neuromuscular Therapy, Sports Massage, Soft Tissue Release, Spa Approaches, Oriental Therapies, and energy techniques. Upon completion, students should be able to perform basic skills in techniques covered.

MTH-220 Outcome-Based Massage 4 6 3 7
Prerequisites: Take MTH-120(S22036) MTH-121 or MTH-221
Corequisites:
This course provides knowledge and skills in more complex body works modalities in a variety of clinical settings. Emphasis is placed on developing advanced skills in outcome-based Massage. Upon completion, students should be able to perform basic skills in techniques covered.

MTH-221 Clinical Supplement II 0 0 6 2
Prerequisites: Take MTH-110(S22033)
Corequisites:
This course is designed to be offered as an advanced clinical experience. Emphasis is placed on applying an advanced therapeutic massage process across the lifespan. Upon completion, students should be able to demonstrate delivery of massage at an advanced level in a clinical setting.

MUSIC (MUS Prefix)

MUS-110 Music Appreciation 3 0 0 3
Prerequisites: Take 1 group; #Take RED-080 ENG-080; #Take DRE-097(S23642)
Corequisites:
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.

MUS-111 Fundamentals of Music 3 0 0 3
Prerequisites: Take 1 group; #Take RED-080 ENG-080; #Take DRE-097(S23642)
Corequisites:
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: Take 1 group; #Take RED-080 ENG-080; #Take DRE-097(S23642)
Corequisites:
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.

MUS-113 American Music 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673)
Corequisites:
This course introduces various musical styles, influences, and composers of the United States from pre-Colonial times to the present. Emphasis is placed on the broad variety of music particular to American culture. Upon completion, students should be able to demonstrate skills in basic listening and understanding of American music.

MUS-114 Non-Western Music 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673)
Corequisites:
This course provides a basic survey of the music of the non-Western world. Emphasis is placed on non-traditional instruments, sources, and performing practices. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of non-Western music.

MUS-121 Music Theory I 3 2 0 4
Prerequisites: Take 1 group; # Take RED-080 ENG-080; #Take DRE-097(S23642)
Corequisites:
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.

MUS-122 Music Theory II 3 2 0 4
Prerequisites: Take MUS-121
Corequisites:
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.

MUS-131 Chorus I 0 2 0 1
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
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: Take MUS-131
Corequisites:
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-133 Band I 0 2 0 1
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
This course provides an opportunity for those who play a band instrument to gain experience playing in an ensemble. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

MUS-134 Band II 0 2 0 1
Prerequisites: Take MUS-133
Corequisites:
This course is a continuation of MUS 133. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

MUS-141 Ensemble I 0 2 0 1
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); # Take DRE-096(S23641)
Corequisites:
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.

MUS-142 Ensemble II 0 2 0 1
Prerequisites: Take MUS-141
Corequisites:
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: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); # Take DRE-096(S23641)
Corequisites:
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.

MUS-151D Class Music I Drums 0 2 0 1
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
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.

MUS-151G **Class Music I:guitar** 0 2 0 1
Prerequisites: Take 1 group; # Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
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.

MUS-151J **Class Music I Jazz** 0 2 0 1
Prerequisites: Take ENG-080 RED-080
Corequisites:
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.

MUS-151P **Class Music I Piano** 0 2 0 1
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
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.

MUS-151V **Class Music I Voice** 0 2 0 1
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); # Take DRE-096(S23641)
Corequisites:
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.

MUS-152 **Class Music II** 0 2 0 1
Prerequisites: Take 1 group; # Take MUS-151; #Take MUS-151D(L50127); #Take MUS-151G(L50447); #Take MUS-151J; #Take MUS-151P; #Take MUS-151V; Take MUS-151
Corequisites:
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS-152D **Class Music II Drum** 0 2 0 1
Prerequisites: Take MUS-151
Corequisites:
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS-152P **Class Music II Piano** 0 2 0 1
Prerequisites: Take MUS-151
Corequisites:
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. null null

MUS-161 **Applied Music I** 1 2 0 2
Prerequisites: Take 1 group; #Take RED-080 ENG-080; #Take DRE-097(S23642)
Corequisites:
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: Take MUS-161(S16445)
Corequisites:
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.

MUS-170 **Business of Music** 3 0 0 3
Prerequisites:
Corequisites:
This course introduces the basic elements of the music business. Topics include copyright law, musical arrangements and abridgements, recording and songwriting contracts, agents and managers, performing rights organizations, and the musician's union. Upon completion, students should be able to demonstrate an understanding of the basic elements of the music business.

MUS-210 **History of Rock Music** 3 0 0 3
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
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-211 **History of Country Music** 3 0 0 3
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
This course introduces the varied origins of country music and the commercialization of this art form. Emphasis is placed on historical, sociocultural, and stylistic factors related to country music and musicians. Upon completion, students should be able to identify specific styles and explain the influence of pop culture on the development of country music.

MUS-212 **American Musical Theatre** 3 0 0 3
Prerequisites: Take 1 group; #Take RED-070(S10648) ENG-070(S16349); #Take DRE-096(S23641)
Corequisites:
This course covers the origins and development of the musical from Show Boat to the present. Emphasis is placed on the investigation of the structure of the musical and its components through listening and analysis. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music.

MUS-221 **Music Theory III** 3 2 0 4
Prerequisites: Take MUS-122
Corequisites:
This course is a continuation of MUS 122. Emphasis is placed on altered and chromatic harmony, common practice era compositional techniques and forms, and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above.

MUS-222 **Music Theory IV** 3 2 0 4
Prerequisites: Take MUS-221
Corequisites:
This course is a continuation of studies begun in MUS 221. Emphasis is placed on continued study of common practice

era compositional techniques and forms, 20th century practices, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above.

MUS-231 Chorus III 0 2 0 1
Prerequisites: Take MUS-132
Corequisites:
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: Take MUS-231;
Corequisites:
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-233 Band III 0 2 0 1
Prerequisites: Take MUS-134
Corequisites:
This course is a continuation of MUS 134. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

MUS-234 Band IV 0 2 0 1
Prerequisites: Take MUS-233
Corequisites:
This course is a continuation of MUS 233. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

MUS-241 Ensemble III 0 2 0 1
Prerequisites: Take MUS-142;
Corequisites:
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.

MUS-242 Ensemble IV 0 2 0 1
Prerequisites: Take MUS-241
Corequisites:
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.

MUS-251 Class Music III 0 2 0 1
Prerequisites: Take MUS-152
Corequisites:
This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS-251P Class Music III Piano 0 2 0 1
Prerequisites: Take MUS-152
Corequisites:
This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of

appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS-252 **Class Music IV** 0 2 0 1
Prerequisites: Take MUS-251
Corequisites:
This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS-252P **Class Music IV Piano** 0 2 0 1
Prerequisites: Take MUS-251
Corequisites:
This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS-261 **Applied Music III** 1 2 0 2
Prerequisites: Take MUS-162(S16446)
Corequisites:
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.

MUS-262 **Applied Music IV** 1 2 0 2
Prerequisites: Take MUS-261(S16449)
Corequisites:
This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS-271 **Music History I** 3 0 0 3
Prerequisites: Take 1 group; #Take MUS-122 RED-090 ENG-090; #Take MUS-122 DRE-098(S23643); #Take MUS-122 ENG-111(S24022); Take MUS-122
Corequisites:
This course is the first of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from Antiquity through the Baroque Period. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composers' styles.

MUS-272 **Music History II** 3 0 0 3
Prerequisites: Take MUS-271
Corequisites:
This course is the second of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from the Classical Period to the present. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composers' styles.

NURSING ASSISTANT (NAS Prefix)

NAS-101 **Nursing Assistant I** 3 4 3 6
Prerequisites:
Corequisites:
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.

NAS-102 Nursing Assistant II 3 2 6 6
Prerequisites:
Corequisites:
This course provides training in selected advanced nursing assistant procedures. Emphasis is placed on sterile techniques, respiratory procedures, catheterizations, wound and trach care, irrigations, and ostomy care. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant II with the North Carolina Board of Nursing.

NAS-103 Home Health Care 2 0 0 2
Prerequisites:
Corequisites: NAS-101
This course covers basic health issues that affect clients in the home setting. Emphasis is placed on home safety, recognizing significant changes in the client's condition, family dynamics, and use of home health care equipment. Upon completion, students should be able to identify care for clients at home.

NETWORKING TECHNOLOGY (NET Prefix)

NET-110 Networking Concepts 2 2 0 3
Prerequisites:
Corequisites:
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.

NET-125 Networking Basics 1 4 0 3
Prerequisites: Take 1 group; # Take CIS-110(S21058) NOS-110 ENG-111(S13673) MAT-121(S23927); #Take CTI-120 CTI-130 ENG-111(S13673) MAT-121(S23927)
Corequisites:
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: Take NET-125(S21095)
Corequisites:
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-198A Seminar in Networking 2 2 0 3
Prerequisites:
Corequisites:
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.

NET-225 Routing & Switching I 1 4 0 3
Prerequisites: Take NET-126(S21096)
Corequisites:
This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.

NET-226 **Routing and Switching II** 1 4 0 3
Prerequisites: Take NET-225(S21098)
Corequisites:
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-240 **Network Design** 3 0 0 3
Prerequisites: Take 1 group; #Take NET-110(S21056) NET-226(S21099) NET-272(S21103); #Take NET-110(S21056) NOS-230(S20989) NOS-231(S20990); #Take NET-110(S21056) NOS-230(S20989) NOS-232(S20991); #Take NET-110(S21056) NOS-220
Corequisites:
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-270 **Building Scalable Networks** 1 4 0 3
Prerequisites: Take NET-226(S21099)
Corequisites:
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-272 **Multi-Layer Networks** 1 4 0 3
Prerequisites: Take NET-226(S21099)
Corequisites:
This course covers building campus networks using multi-layer switching technologies over a high-speed Ethernet. Topics include improving IP routing performance with multi-layer switching, implementing fault tolerance routing, and managing high bandwidth broadcast while controlling IP multi-cast access to networks. Upon completion, students should be able to install and configure multi-layer enterprise networks and determine the required router configurations to support new services and applications.

NET-273 **Internetworking Support** 1 4 0 3
Prerequisites: Take NET-270(S21101) NET-272(S21103); Take NET-226(S21099)
Corequisites:
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-289 **Networking Project** 1 4 0 3
Prerequisites: Take 1 group; # Take NET-226(S21099) NET-272(S21103); #Take NET-226(S21099) NOS-231(S20990); #Take NET-226(S21099) NOS-221; #Take NET-226(S21099) CTI-240
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.

NETWORKING OPERATING SYSTEMS (NOS Prefix)

NOS-110 Operating Systems Concepts 2 3 0 3
Prerequisites:
Corequisites:
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: Take NOS-110 CET-211(S21575) or CTI-130
Corequisites:
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: Take NOS-110 CET-211(S21575) or CTI-130
Corequisites:
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 Administration I 2 2 0 3
Prerequisites: Take NOS-120(S20982)
Corequisites:
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 Administration II 2 2 0 3
Prerequisites: Take NOS-220
Corequisites:
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 Administration III 2 2 0 3
Prerequisites: Take NOS-221
Corequisites:
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 Administration I 2 2 0 3
Prerequisites:
Corequisites:
This course covers the installation and configuration of a Windows Server operating system. Emphasis is placed on the basic configuration of core network services, Active Directory and group policies. Upon completion, students should be able to install and configure a Windows Server operating system.

NOS-231 **Windows Administration II** 2 2 0 3
Prerequisites: Take NOS-230(S24041)
Corequisites:
This course covers the management of a Windows Server operating system. Emphasis is placed on the deployment of print services, network services, Active Directory, group policies and access controls. Upon completion, students should be able to deploy and manage services on a Windows Server operating system.

NOS-232 **Windows Administration III** 2 2 0 3
Prerequisites: Take NOS-230(S24041)
Corequisites:
This course covers management and configuration of a highly available Windows Server operating system. Emphasis is placed on the implementation of business continuity and disaster recovery procedures for network services and access controls. Upon completion, students should be able to manage and configure a highly available Windows Server operating system.

NOS-233 **Windows Administration IV** 2 2 0 3
Prerequisites: Take NOS-230(S24041)
Corequisites:
This course covers the design of a Windows Server operating system. Emphasis is placed on the design of network infrastructure, Active Directory, group policies and access controls. Upon completion, students should be able to design and manage services on a Windows Server operating system.

NURSING (NUR Prefix)

NUR-111 **Introduction to Health Concepts** 4 6 6 8
Prerequisites:
Corequisites:
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: Take NUR-111
Corequisites:
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: Take NUR-111
Corequisites:
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: Take NUR-111
Corequisites:
null 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: Take NUR-111
Corequisites:
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: Take NUR-111
Corequisites:
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: Take NUR-111
Corequisites: NUR-112 NUR-113 NUR-114 NUR-211 NUR-212
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: Take ENG-111(S13673) PSY-150 PSY-241 BIO-168(S11555) BIO-169(S11629) BIO-155;
Corequisites:
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.

NUTRITION (NUT Prefix)

NUT-110 Nutrition 3 0 0 3
Prerequisites: Take CUL-140(S12163)
Corequisites:
This course covers basic principals of nutrition and their relationship to human health. Topics include meeting nutritional needs of healthy people, menu modification based on special dietary needs, food habits, and contemporary problems associated with nutrition. Upon completion, students should be able to apply basic nutritional concepts as they relate to health and well being.

OPERATIONS MANAGEMENT (OMT Prefix)

OMT-154 Customer Satisfaction 2 0 0 2
Prerequisites: Take CTS-118
Corequisites:
This course is a study of quality issues relating to customer satisfaction and long-term customer support. Topics include quality through the eyes of the customer, clarifying customer expectations, resolving customer dissatisfaction, and building individual and long-term commitment to quality. Upon completion, students should be able to understand quality issues related to enhancing customer satisfaction (both internal and external) to ensure long-term customer loyalty.

OPERATING SYSTEMS MANAGEMENT (OSS Prefix)

OSS-120 Introduction to Aix 2 2 0 3
Prerequisites:
Corequisites:
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 Sys Administrat I 2 2 0 3
Prerequisites:
Corequisites:
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 Sys Administrat II 2 2 0 3
Prerequisites:
Corequisites:
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)

OST-080 Keyboarding Literacy 1 2 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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: Take OST-080(S12295) OST-131 or OST-134(S22142)
Corequisites:
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: Take OST-080(S12295) or OST-131
Corequisites:
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.

OST-135 **Advanced Text Entry & Formatting** 3 2 0 4
Prerequisites: Take OST-134(S22142)
Corequisites:
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:
Corequisites:
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.

OST-137 **Office Software Applications** 2 2 0 3
Prerequisites:
Corequisites:
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.

OST-138 **Advanced Software Applications** 2 2 0 3
Prerequisites: Take OST-137(S22113) CIS-111(S21059) or CIS-110(S21058)
Corequisites:
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.

OST-140 **Internet Communication and Research** 1 2 0 2
Prerequisites:
Corequisites:
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 **Med Terms I-Med Office** 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

OST-142 **Med Terms II-Med Office** 3 0 0 3
Prerequisites: Take OST-141
Corequisites:
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 Medical Coding Billing & Insurance 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course introduces fundamentals of medical coding, billing, and insurance. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim.

OST-149 Medical Legal Issues 3 0 0 3
Prerequisites: Take 1 group; # Take RED-090 ENG-090; #Take DRE-098(S23643); #Take ENG-111(S13673)
Corequisites:
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:
Corequisites:
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:
Corequisites:
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: Take 1 group; #Take OST-136(S22144) OST-155(S22150) OST-134(S11818); #Take OST-136 (S22144) OST-155(S22150) OST-134(S22142); Take OST-134(S11818) or OST-134(S16488)
Corequisites:
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 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: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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:
Corequisites:
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:
Corequisites:
This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.

OST-188 Issues in Office Technology 2 0 0 2
Prerequisites:
Corequisites:
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: Take OST-136(S13837)
Corequisites:
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 Advanced Word Or Information Processsing 2 2 0 3
Prerequisites: Take OST-136(S22144)
Corequisites:
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.

OST-241 Med Ofc Transcription I 1 2 0 2
Prerequisites: Take 1 group; #Take MED-121 OST-164 OST-134(S22142); #Take OST-141 OST-164 OST-134(S22142); Take MED-121 or OST-141
Corequisites:
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-243 Med Office Simulation 2 2 0 3
Prerequisites: Take OST-148(S11620)
Corequisites:
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 Medical Document Production 1 2 0 2
Prerequisites: Take OST-134(S11818)
Corequisites:
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: Take 1 group; #Take MED-121 MED-122 OST-148(S22148); #Take MED-121 OST-142 OST-148(S22148); #Take OST-141 MED-122 OST-148(S22148); #Take OST-141 OST-142 OST-148(S22148); Take MED-121 or OST-141
Corequisites:
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: Take 1 group; #Take MED-121 MED-122 OST-148(S22148); #Take MED-121 OST-142 OST-148(S22148); #Take OST-141 MED-122 OST-148(S22148); #Take OST-141 OST-142 OST-148(S22148); Take MED-121 or OST-141
Corequisites:
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: #Take OST-155(S22150); #Take OST-134(S22142) or OST-136(S22144)
Corequisites:
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 **Emer Issues in Med Ofc** 3 0 0 3
Prerequisites: Take OST-148(S22148)
Corequisites:
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: Take OST-140 or OST-137(S22113)
Corequisites:
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: Take OST-134(S22142) or OST-136(S22144)
Corequisites:
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 Management** 2 2 0 3
Prerequisites: Take 1 group; # Take OST-164 OST-134(S22142) OST-138(S22145) OST-236(S22156); #Take OST-164 OST-136(S22144) OST-138(S22145) OST-236(S22156)
Corequisites:
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)

PBT-100 Phlebotomy Technology 5 2 0 6
Prerequisites:
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:
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)

PCI-163 Process Control Circuits 3 3 0 4
Prerequisites: Take PCI-170
Corequisites:
This course introduces the characteristics and applications of linear amplifier circuits used in process control instrumentation systems. Topics include circuits with emphasis on amplifiers, signal conditioning and other related devices. Upon completion, students should be able to demonstrate an understanding of circuits used in the process control instrumentation environment.

PCI-170 DAQ and Control 3 3 0 4
Prerequisites:
Corequisites: ELN-133
This course is a survey of data acquisition and control applications in an industrial setting. Topics include remote I/O systems, PC-based data acquisition, real-time monitoring, and other related topics. Upon completion, students should be able to demonstrate an understanding of data acquisition circuits.

PCI-171 Fieldbus Systems 3 3 0 4
Prerequisites: Take ELC-128(S23522)
Corequisites:
This course is a survey of fieldbus systems found in the industrial setting. Topics include industrial data communication fieldbus and control networks for linking various control systems in an industrial environment. Upon completion, students should be able to demonstrate an understanding of fieldbus systems used to connect control systems.

PCI-172 SCADA Systems 3 3 0 4
Prerequisites:
Corequisites:
This course is a survey of SCADA systems found in the industrial setting. Topics include single and/or multiple machine operator interfaces utilizing hardware and software systems running SCADA or HMI software for system monitoring and control. Upon completion, students should be able to demonstrate an understanding of the utilization and implementation of custom and commercial SCADA or HMI software.

PCI-261 Process Measurement 2 3 0 3
Prerequisites: Take ATR-215(S21583)
Corequisites:
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 Intro to Process Control 3 3 0 4
Prerequisites: Take ATR-215(S21583)
Corequisites:
This course introduces process control and related instrumentation devices. Topics include basic process control theory, P&ID 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.

PHYSICAL EDUCATION (PED Prefix)

PED-110 Fit and Well for Life 1 2 0 2
Prerequisites:
Corequisites:
This course is designed to investigate and apply the basic concepts and principles of lifetime physical fitness and other health-related factors. Emphasis is placed on wellness through the study of nutrition, weight control, stress management, and consumer facts on exercise and fitness. Upon completion, students should be able to plan a personal, lifelong fitness program based on individual needs, abilities, and interests.

PED-111 Physical Fitness I 0 3 0 1
Prerequisites:
Corequisites:
This course provides an individualized approach to physical fitness utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs. Upon completion, students should be able to set up and implement an individualized physical fitness program.

PED-112 Physical Fitness II 0 3 0 1
Prerequisites: Take PED-111
Corequisites:
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.

PED-113 Aerobics I 0 3 0 1
Prerequisites:
Corequisites:
This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program.

PED-114 Aerobics II 0 3 0 1
Prerequisites: Take PED-113
Corequisites:
This course provides a continuation of a program of cardiovascular fitness involving rhythmic exercise. Emphasis is placed on a wide variety of aerobic activities which include cardiovascular efficiency, strength, and flexibility. Upon completion, students should be able to participate in and design a rhythmic aerobic exercise routine.

PED-117 Weight Training I 0 3 0 1
Prerequisites:
Corequisites:
This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program.

PED-118 **Weight Training II** 0 3 0 1
Prerequisites: Take PED-117
Corequisites:
This course covers advanced levels of weight training. Emphasis is placed on meeting individual training goals and addressing weight training needs and interests. Upon completion, students should be able to establish and implement an individualized advanced weight training program.

PED-119 **Circuit Training** 0 3 0 1
Prerequisites:
Corequisites:
This course covers the skills necessary to participate in a developmental fitness program. Emphasis is placed on the circuit training method which involves a series of conditioning timed stations arranged for maximum benefit and variety. Upon completion, students should be able to understand and appreciate the role of circuit training as a means to develop fitness.

PED-121 **Walk, Jog, Run** 0 3 0 1
Prerequisites:
Corequisites:
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:
Corequisites:
This course introduces the basic discipline of yoga. Topics include proper breathing, relaxation techniques, and correct body positions. Upon completion, students should be able to demonstrate the procedures of yoga.

PED-123 **Yoga II** 0 2 0 1
Prerequisites: Take PED-122
Corequisites:
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.

PED-125 **Self-Defense: Beginning** 0 2 0 1
Prerequisites:
Corequisites:
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.

PED-126 **Self-Defense: Intermediate** 0 2 0 1
Prerequisites: Take PED-125
Corequisites:
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.

PED-128 **Golf-Beginning** 0 2 0 1
Prerequisites:
Corequisites:
This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf.

PED-129 **Golf-Intermediate** 0 2 0 1
Prerequisites: Take PED-128
Corequisites:
This course covers the more advanced phases of golf. Emphasis is placed on refining the fundamental skills and learning more advanced phases of the games such as club selection, trouble shots, and course management. Upon completion, students should be able demonstrate the knowledge and ability to play a recreational round of golf.

PED-130 **Tennis-Beginning** 0 2 0 1
Prerequisites:
Corequisites:
This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis.

PED-131 **Tennis-Intermediate** 0 2 0 1
Prerequisites: Take PED-130
Corequisites:
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.

PED-138 **Archery** 0 2 0 1
Prerequisites:
Corequisites:
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.

PED-139 **Bowling-Beginning** 0 2 0 1
Prerequisites:
Corequisites:
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.

PED-142 **Lifetime Sports** 0 2 0 1
Prerequisites:
Corequisites:
This course is designed to give an overview of a variety of sports activities. Emphasis is placed on the skills and rules necessary to participate in a variety of lifetime sports. Upon completion, students should be able to demonstrate an awareness of the importance of participating in lifetime sports activities.

PED-143 **Volleyball-Beginning** 0 2 0 1
Prerequisites:
Corequisites:
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.

PED-144 **Volleyball-Intermediate** 0 2 0 1
Prerequisites: Take PED-143
Corequisites:
This course covers more advanced volleyball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to participate in competitive volleyball.

PED-145 Basketball-Beginning 0 2 0 1
Prerequisites:
Corequisites:
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.

PED-146 Basketball-Intermediate 0 2 0 1
Prerequisites: Take PED-145
Corequisites:
This course covers more advanced basketball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play basketball at a competitive level.

PED-147 Soccer 0 2 0 1
Prerequisites:
Corequisites:
This course introduces the basics of soccer. Emphasis is placed on rules, strategies, and fundamental skills. Upon completion, students should be able to participate in recreational soccer.

PED-148 Softball 0 2 0 1
Prerequisites:
Corequisites:
This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to participate in recreational softball.

PED-150 Baseball - Beginning 0 3 0 1
Prerequisites:
Corequisites:
This course covers the fundamentals of baseball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational baseball.

PED-151 Baseball/Intermediate 0 3 0 1
Prerequisites: Take PED-150
Corequisites:
This course covers more advanced baseball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play baseball at a competitive level.

PED-177 Ice Skating 0 2 0 1
Prerequisites:
Corequisites:
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:
Corequisites:
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.

PED-233 Ju-Jitsu 0 3 0 1
Prerequisites:
Corequisites:
This course introduces martial arts using the ju-jitsu form. Topics include proper conditioning exercises, proper terminology, historical foundations, etiquette, and drills. Upon completion, students should be able to perform skills and techniques related to this form of martial arts.

PED-239 **Kickboxing** 0 3 0 1
Prerequisites:
Corequisites:
This course introduces martial arts using the kickboxing form. Topics include proper conditioning exercises, proper terminology, historical foundations, etiquette, and drills. Upon completion, students should be able to perform skills and techniques related to this form of martial arts.

PHILOSOPHY (PHI Prefix)

PHI-210 **History of Philosophy** 3 0 0 3
Prerequisites: Take ENG-111(S13673); Minimum grade C
Corequisites:
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: Take ENG-111(S13673); Minimum grade C
Corequisites:
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-215 **Philosophical Issues** 3 0 0 3
Prerequisites: Take ENG-111(S24022)
Corequisites:
This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critically evaluate the philosophical components of an issue.

PHI-220 **Western Philosophy I** 3 0 0 3
Prerequisites: Take ENG-111(S13673); Minimum grade C
Corequisites:
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: Take ENG-111(S13673); Minimum grade C
Corequisites:
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: Take ENG-111(S13673); Minimum grade C
Corequisites:
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: Take ENG-111(S13673); Minimum grade C
Corequisites:
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-240 Introduction to Ethics 3 0 0 3
Prerequisites: Take ENG-111(S24022)
Corequisites:
This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on moral theories such as consequentialism, deontology, and virtue ethics. Upon completion, students should be able to apply various ethical theories to moral issues such as abortion, capital punishment, poverty, war, terrorism, the treatment of animals, and issues arising from new technologies.

PHI-250 Philosophy of Science 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-111(S13673) MAT-161(S20916); Minimum grade C; #ake ENG-111(S13673) MAT-171(S20807); Minimum grade C; #Take ENG-111(S13673) MAT-175; Minimum grade C;
Corequisites:
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.

PHARMACY (PHM Prefix)

PHM-110 Introduction to Pharmacy 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites: PHM-110 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:
Corequisites:
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:
Corequisites:
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: Take PHM-110(S12770) PHM-111
Corequisites:
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:
Corequisites:
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: Take PHM-120
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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:
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:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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)

PHY-110 Conceptual Physics 3 0 0 3
Prerequisites:
Corequisites:
This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied.

PHY-110A **Conceptual Physics Lab** 0 2 0 1
Prerequisites:
Corequisites: PHY-110
This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110.

PHY-121 **Applied Physics I** 3 2 0 4
Prerequisites: Take MAT-060 or DMA-030
Corequisites:
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: Take MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-175
Corequisites:
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-131 **Physics-Mechanics** 3 2 0 4
Prerequisites: Take MAT-121(S23927) or MAT-171(S23934)
Corequisites:
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-151 **College Physics I** 3 2 0 4
Prerequisites: Take MAT-171(S23934)
Corequisites:
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.

PHY-152 **College Physics II** 3 2 0 4
Prerequisites: Take PHY-151(S20924); Minimum grade C
Corequisites:
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.

PHY-153 **Modern Topics in Physics** 3 2 0 4
Prerequisites: Take PHY-151(S16517)
Corequisites:
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: Take MAT-271(S13631); Minimum grade C;
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.

PHY-252 **General Physics II** 3 3 0 4
Prerequisites: Take MAT-272(S13612) PHY-251; Minimum grade C;
Corequisites:
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.

PLASTICS (PLA Prefix)

PLA-110 **Introduction to Plastics** 2 0 0 2
Prerequisites:
Corequisites:
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-120 **Injection Molding** 2 3 0 3
Prerequisites:
Corequisites:
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.

PLUMBING (PLU Prefix)

PLU-110 **Modern Plumbing** 4 15 0 9
Prerequisites:
Corequisites:
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-110AB **Modern Plumbing** 4 0 0 4
Prerequisites:
Corequisites:
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-110BB **Modern Plumbing** 0 15 0 5
Prerequisites:
Corequisites: PLU-110AB
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-115 Basic Plumbing 2 6 0 4
Prerequisites:
Corequisites:
This course covers the basic installation and maintenance of plumbing systems and components. Topics include safe use of tools, implementation of standard practices, and installation/maintenance of piping, fittings, valves, appliances and fixtures used in plumbed systems. Upon completion, students should be able to install/maintain basic plumbing systems, components, appliances, and fixtures through appropriate use of plumbing tools and standard practices.

PLU-120 Plumbing Applications 4 15 0 9
Prerequisites:
Corequisites:
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 3 6 0 5
Prerequisites:
Corequisites:
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-120B Plumbing Applications 1 9 0 4
Prerequisites: Take PLU-120A
Corequisites:
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-130 Plumbing Systems 3 9 0 6
Prerequisites:
Corequisites:
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 Intro to Plumbing Codes 1 2 0 2
Prerequisites:
Corequisites: PLU-160
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:
Corequisites:
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-160 Plumbing Estimates 1 2 0 2
Prerequisites:
Corequisites: PLU-140
This course covers techniques for estimating quantities of materials and cost of installation for various types of plumbing systems. Topics include design of systems, codes, material take-offs, pricing, and public relations. Upon completion, students should be able to order materials needed for installation from a designed system.

PLU-192A Selected Topics in Plumbing 1 2 0 2
Prerequisites:
Corequisites: PLU-140
This course provides an opportunity to explore areas of current interest in the 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.

POWER MECHANICS (PME Prefix)

PME-111 Harvest and Spraying Equipment 2 6 0 4
Prerequisites:
Corequisites:
This course covers the theory, design principles of operation, adjustments, troubleshooting and repair of harvesting and spraying equipment. Emphasis is placed on set-up, troubleshooting and repair of systems. Upon completion, students should be able to diagnose, adjust or repair new and used harvesters and sprayers in accordance with manufacturer's specifications.

PME-112 Consumer Products 1 2 0 2
Prerequisites:
Corequisites:
This course introduces compact utility, lawn and garden tractors, and other related equipment and attachments. Topics include set-up, adjustments and general servicing of equipment. Upon completion, students should be able to set-up, adjust, service and repair equipment.

PME-113 Const Equipment Repair 1 2 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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 1 3 0 2
Prerequisites:
Corequisites:
This course covers specific operating controls used on modern equipment. Emphasis is placed on the mechanical, hydraulic, and electronic controls in powertrains, guidance controls, and implements used on agricultural equipment. Upon completion, students should be able to identify, diagnose, adjust, and repair control systems used on modern equipment.

PME-122 Agricultural Telematics 2 3 0 3
Prerequisites:
Corequisites:
This course covers the set-up, activation, and programming for computerized and guidance controls for agricultural harvesting and planting equipment. Emphasis is placed on set-up, troubleshooting and repair of system. Upon completion, students should be able to install, program, and troubleshoot the system.

PME-211 Adv Equipment Repair 2 6 0 4
Prerequisites:
Corequisites:
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 Const Equip Servicing 1 2 0 2
Prerequisites:
Corequisites:
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)

POL-110 Introduction to Political Science 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and sovereignty in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems.

POL-120 American Government 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S24022); #Take DRE-098(S23643)
Corequisites:
This course is a study of the origins, development, structure, and functions of American government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy process. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system.

POL-130 State & Local Government 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
This course includes state and local political institutions and practices in the context of American federalism. Emphasis is placed on procedural and policy differences as well as political issues in state, regional, and local governments of North Carolina. Upon completion, students should be able to identify and discuss various problems associated with intergovernmental politics and their effect on the community and the individual.

POL-210 **Comparative Government** 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673)
Corequisites:
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.

PHYSCIAL FITNESS TECHNOLOGY (PSF Prefix)

PSF-110 **Exercise Science** 4 0 0 4
Prerequisites:
Corequisites:
This course is a survey of scientific principles, methodologies, and research as applied to exercise and physical adaptations to exercise. Topics include the basic elements of kinesiology, biomechanics, and motor learning. Upon completion, students should be able to identify and describe physiological responses and adaptations to exercise.

PSF-111 **Fitness & Exer Testing I** 3 2 0 4
Prerequisites:
Corequisites:
This course introduces the student to graded exercise testing. Topics include various exercise testing protocols with methods for prescribing exercise programs based on exercise tolerance tests and the use of various equipment and protocols. Upon completion, students should be able to conduct specific exercise tests and the use of various equipment.

PSF-114 **Phys Fit Theory & Instr** 4 0 0 4
Prerequisites: Take PSF-110
Corequisites:
This course provides information about related components of fitness and general information about the industry. Topics include the study of the components of fitness, theories of exercise and fitness, and information about the industry. Upon completion, students should be able to identify fitness components and demonstrate these in an exercise setting.

PSF-116 **Pvnt & Care Exer Injuries** 2 2 0 3
Prerequisites:
Corequisites:
This course provides information about the care and prevention of exercise injuries. Topics include proper procedures, prevention techniques, and on-site care of injuries. Upon completion, students should be able to demonstrate the knowledge and skills necessary to prevent and care for exercise related injuries.

PSF-118 **Fitness Facility Management** 4 0 0 4
Prerequisites:
Corequisites:
This course provides information about the management and operation of health and fitness facilities and programs. Topics include human resources, sales and marketing, member retention, financial management, facility design and maintenance, and risk management. Upon completion, students should be able to demonstrate the knowledge and skills necessary to effectively manage a fitness facility.

PSF-120 **Group Exercise Instruction** 2 2 0 3
Prerequisites: Take PSF-110
Corequisites:
This course introduces the concepts and guidelines of instructing exercise classes. Topics include program designs, working with special populations, and principles of teaching and monitoring physical activity. Upon completion, students should be able to demonstrate basic skills in instructing an exercise class and monitoring workout intensity.

PSF-210 **Personal Training** 2 2 0 3
Prerequisites: Take PSF-110 PSF-111
Corequisites:
This course introduces the student to the aspects of personal (one-on-one) training. Topics include training systems, marketing, and program development. Upon completion, students should be able to demonstrate personal training techniques and competencies of same.

PSF-212 **Exercise Programming** 2 2 0 3
Prerequisites: Take PSF-110
Corequisites:
This course provides information about organizing, scheduling, and implementation of physical fitness programs. Topics include programming for various age groups, competitive activities and special events, and evaluating programs. Upon completion, students should be able to organize and implement exercise activities in a competent manner.

PSF-218 **Lifestyle Chng & Wellness** 3 2 0 4
Prerequisites:
Corequisites:
This course introduces health risk appraisals and their application to lifestyle changes. Topics include nutrition, weight control, stress management, and the principles of exercise. Upon completion, students should be able to conduct health risk appraisals and apply behavior modification techniques in a fitness setting.

PSYCHOLOGY (PSY Prefix)

PSY-110 **Life Span Development** 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111(S13673); # Take DRE-098(S23643)
Corequisites:
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.

PSY-231 **Forensic Psychology** 3 0 0 3
Prerequisites: Take PSY-150
Corequisites:
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.

PSY-237 Social Psychology 3 0 0 3
Prerequisites: Take PSY-150 or SOC-210; Minimum grade C
Corequisites:
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.

PSY-239 Psychology of Personality 3 0 0 3
Prerequisites: Take PSY-150; Minimum grade C
Corequisites:
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.

PSY-241 Developmental Psychology 3 0 0 3
Prerequisites: Take PSY-150; Minimum grade C
Corequisites:
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.

PSY-259 Human Sexuality 3 0 0 3
Prerequisites: Take PSY-150; Minimum grade C
Corequisites:
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.

PSY-263 Educational Psychology 3 0 0 3
Prerequisites: Take PSY-150; Minimum grade C
Corequisites:
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.

PSY-281 Abnormal Psychology 3 0 0 3
Prerequisites: Take PSY-150; Minimum grade C
Corequisites:
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.

PHARMACEUTICAL TECHNOLOGY (PTC Prefix)

PTC-110 Industrial Environment 3 0 0 3
Prerequisites:
Corequisites:
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: Take PTC-110 MAT-121(S12145)
Corequisites:
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-120 Pharmaceutical Quality Control 3 2 0 4
Prerequisites: Take PTC-110
Corequisites:
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 Pharm Tech 2 2 0 3
Prerequisites:
Corequisites:
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.

PTC-210 Pharmaceutical Industrial Processes 3 2 0 4
Prerequisites:
Corequisites:
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: Take BIO-110(S13284) or BIO-111(S13307)
Corequisites:
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:
Corequisites:
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:
Corequisites:
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: Take PTC-110
Corequisites:
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:
Corequisites:
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)

RAD-110 **Rad Intro & Patient Care** 2 3 0 3
Prerequisites:
Corequisites: RAD-111 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 **RAD Procedures I** 3 3 0 4
Prerequisites:
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 **RAD Procedures II** 3 3 0 4
Prerequisites: Take 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: Take RAD-110 RAD-111 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-121 **Radiographic Imaging I** 2 3 0 3
Prerequisites: Take RAD-110 RAD-111 RAD-151
Corequisites: RAD-112 RAD-161
This course provides the basic principles of imaging. Emphasis is placed on the factors that impact density, contrast, recorded detail, and distortion. Upon completion, students should be able to demonstrate an understanding of basic radiographic imaging.

RAD-122 **Radiographic Imaging II** 1 3 0 2
Prerequisites: Take RAD-112(S13039) RAD-121(S22447) 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:
Corequisites:
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-131 Radiographic Physics I 1 3 0 2
Prerequisites: Take RAD-121(S23863)
Corequisites: RAD-122 RAD-171
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:
Corequisites: RAD-110 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 RAD Clinical Ed II 0 0 15 5
Prerequisites: Take 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 RAD Clinical Ed III 0 0 12 4
Prerequisites: Take RAD-112(S13039) RAD-121(S13711) 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 RAD Procedures III 2 3 0 3
Prerequisites: Take RAD-131(S22449) RAD-171 RAD-122(S22448)
Corequisites: RAD-231 RAD-241 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-211 Radiographic Procedures III 2 3 0 3
Prerequisites: Take RAD-122(S22448) RAD-131(S23864) RAD-171
Corequisites: RAD-231 RAD-241 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: Take 1 group; #Take RAD-122(S22448) RAD-171; # Take RAD-122(S22448) RAD-131(S22449); Take RAD-171 or RAD-131(S22449)
Corequisites: RAD-211 RAD-241 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-231 **Radiographic Physics II** 1 3 0 2
Prerequisites: Take RAD-171 RAD-131(S23864)
Corequisites: RAD-211 RAD-241 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: Take RAD-122(S13744) RAD-131(S11316) RAD-17
Corequisites: RAD-211 RAD-231 RAD-251 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: Take RAD-211(S22450) RAD-231(S22451) RAD-241(S20874) RAD-251
Corequisites: RAD-261 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-245 **Image Analysis** 1 3 0 2
Prerequisites: Take RAD-211(S23865) RAD-231(S23866) RAD-241(S20874) RAD-251
Corequisites: RAD-261 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 **RAD Clinical Ed IV** 0 0 21 7
Prerequisites: Take RAD-122(S13744) RAD-131(S11316) 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: Take RAD-211(S11492) RAD-231(S20873) RAD-241(S20874) RAD-251
Corequisites: RAD-245 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-261 **Radiographic Clinical Education V** 0 0 21 7
Prerequisites: Take RAD-251;Take RAD-251;
Corequisites: RAD-245 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: Take RAD-211(S11492) RAD-231(S12795) RAD-241(S13626) 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 demonstrat the knowledge required of an entry-level radiographer.

REAL ESTATE APPRAISAL (REA Prefix)

REA-111 **Intro Real Estate Appraisal R-1** 2 0 0 2
Prerequisites:
Corequisites:
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 & Practices R-2** 2 0 0 2
Prerequisites: Take REA-111
Corequisites:
This course introduces procedures used to develop an estimate of value and how the various principles of value related 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 a Uniform Residential Appraisal Report (URAR).

REA-113 **Applied Residential Property Val R-3** 1 0 0 1
Prerequisites: Take REA-112
Corequisites:
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 **USPAP R-4** 1 0 0 1
Prerequisites: Take REA-113
Corequisites:
The 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 North Carolina Appraisal Board. Upon completion, students should be able to demonstrate a knowledge of appraisal standards and sit for the National USPAP examination.

REA-210 **Site Value Cost Approach** 1 0 0 1
Prerequisites: Take REA-219
Corequisites:
This course teaches the concepts and methodology used for determining site value and the valuation of residential improvements using the cost approach. Topics include methods in site valuation, replacement/reproduction cost, estimating accrued depreciation, concepts/definitions, and case studies. Upon completion, students should be able to understand the concepts and applications of site valuation and cost approaches for residential properties.

REA-214 **Basic Appraisal Principle** 2 0 0 2
Prerequisites:
Corequisites:
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: Take REA-214
Corequisites:
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 Uniform Standards of Professional Appraisal Practice** 1 0 0 1
Prerequisites: Take REA-215
Corequisites:
This course introduces all aspects of the appraisers146 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: Take REA-217
Corequisites:
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)

RED-070 **Essential Reading Skills** 3 2 0 4
Prerequisites:
Corequisites:
This course is designed to strengthen reading skills. Emphasis is placed on basic word attack skills, vocabulary, transitional words, paragraph organization, basic comprehension skills, and learning strategies. Upon completion, students should be able to demonstrate competence in the skills required for RED 080.

RED-080 **Introduction to College Reading** 3 2 0 4
Prerequisites: Take RED-070(S10648) or ENG-075
Corequisites:
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: Take RED-080 or ENG-085
Corequisites:
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)

REL-110 World Religions 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

REL-111 Eastern Religions 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673)
Corequisites:
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.

REL-112 Western Religions 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

REL-211 Introduction to Old Testament 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature.

REL-212 Introduction to New Testament 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature.

REL-221 Religion in America 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

REAL ESTATE (RLS Prefix)

RLS-112 Broker Prelicensing 5 0 0 5
Prerequisites:
Corequisites:
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: Take RLS-112(S16530) or RLS-112(S11167)
Corequisites:
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)

SAB-110 **Substance Abuse Overview** 3 0 0 3
Prerequisites:
Corequisites:
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: Take DRE-098(S23643)
Corequisites:
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 weakness, 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: Take DRE-098(S23643) DMA-010 DMA-020 DMA-030 DMA-040 DMA-050
Corequisites:
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-135 **Addictive Process** 3 0 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
This course explores the physical, emotional, psychological, and cultural aspects of the addictive process. Emphasis is placed on addictions to food, sex, alcohol, drugs, work, gambling, and relationships. Upon completion, students should be able to identify the effects, prevention strategies, and treatment methods associated with addictive disorders.

SAB-210 **Sub Abuse Counseling** 2 2 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
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: Take HSE-112 DRE-098(S23643)
Corequisites:
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 Sab Issues in Client Serv 3 0 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
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)

SEC-110 Security Concepts 2 2 0 3
Prerequisites:
Corequisites:
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: Take 1 group; #Take SEC-110(S21053) NET-110(S21056); #Take SEC-110(S21053) NET-125(S21095)
Corequisites:
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 Security Administration I 2 2 0 3
Prerequisites: Take 1 group; #Take SEC-110(S21053) NET-110(S21056); #Take SEC-110(S21053) NET-125(S21095)
Corequisites:
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-193A Selected Topics in Security 2 2 0 3
Prerequisites:
Corequisites:
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.

SEC-210 Intrusion Detection 2 2 0 3
Prerequisites: Take SEC-160
Corequisites:
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:
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-270 **Secure Routing/Firewalls** 1 4 0 3
Prerequisites: Take NET-226(S21099) SEC-110(S21053)
Corequisites:
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. null This course is restricted to the Information Systems Security/Security Hardware curriculum.

SEC-289 **Security Capstone Project** 1 4 0 3
Prerequisites: Take SEC-220
Corequisites:
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)

SGD-111 **Introduction to Simulation and Game Development** 2 3 0 3
Prerequisites:
Corequisites:
This course provides students with an introduction to simulation and game development. Topics include setting, storytelling, narrative, character design, interface design, game play, internal economy, core mechanics, game genres, AI, the psychology of game design and professionalism. Upon completion, students should be able to demonstrate knowledge of the major aspects of simulation and game design and development.

SGD-112 **Simulation and Game Development Design** 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the fundamentals of simulation and game design. Topics include industry standards and design elements for simulation and games. Upon completion, students should be able to design simple simulations and/or games.

SGD-113 **Simulation and Game Development Programming** 2 3 0 3
Prerequisites: Take DRE-096(S23641) DMA-050
Corequisites:
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: Take SGD-116
Corequisites:
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 MAT-121(S23927) or MAT-171(S23934)
Corequisites:
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-116 Graphic Design Tools 2 2 0 3
Prerequisites:
Corequisites:
This course introduces students to computer-based graphic design tools and their use within the context of simulation and game design. Topics include texture creation, map creation, and introduction to advanced level graphic design techniques. Upon completion, students should be able to competently use and explain industry-standard graphic design software.

SGD-117 Art for Games 2 3 0 3
Prerequisites:
Corequisites:
This course introduces students to the basic principles of art and how they apply to simulations and games. Emphasis is placed on learning to develop industry quality concept art for characters and other assets, as well as techniques needed to create such art. Upon completion, students should be able to create their own industry standard concept art for use in SGD projects.

SGD-122 Simulation and Game Database Programming 2 3 0 3
Prerequisites:
Corequisites:
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-125 Simulation and Game Artificial Intelligence 2 3 0 3
Prerequisites: Take SGD-113 CSC-134(S21066) or CSC-151
Corequisites:
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 simulation and games.

SGD-134 SG Quality Assurance 2 2 0 3
Prerequisites: Take SGD-112
Corequisites:
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-135 Serious Games 3 0 0 3
Prerequisites: Take SGD-111(S21240) SGD-112 SGD-116
Corequisites:
This course provides students with an overview of serious games and their applications in immersive learning and education. Emphasis is placed on developing games for education, corporate training, and medical/military simulations. Upon completion, students should be able to design their own serious games.

SGD-158 SGD Business Management 3 0 0 3
Prerequisites: Take ENG-111(S13673) SGD-111(S21240) SGD-112
Corequisites:
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 Management 3 0 0 3
Prerequisites: Take SGD-111(S21240)
Corequisites:
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 Simulation and Game Animation 2 3 0 3
Prerequisites: Take SGD-114
Corequisites:
This course introduces the fundamental principles of animation used in simulation and game development. Emphasis is placed on 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 Simulation and Game 3-D Animation 2 3 0 3
Prerequisites: Take SGD-114
Corequisites:
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 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 Simulation and Game Documentation 2 3 0 3
Prerequisites: Take ENG-111(S13673) SGD-111(S21240)
Corequisites:
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 Simulation and Game Audio and Video 2 3 0 3
Prerequisites: Take SGD-111(S21240) SGD-174
Corequisites:
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 Simulation and Game Character Development 2 3 0 3
Prerequisites: Take SGD-114
Corequisites:
This course introduces the concepts needed to create 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 Simulation and Game Physiology and Kinesiology 3 0 0 3
Prerequisites:
Corequisites:
This course introduces the principles of 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 Simulation and Game Ethics 3 0 0 3
Prerequisites: Take ENG-111(S13673) SGD-111(S21240)
Corequisites:
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 Simulation and Game Programming I 2 3 0 3
Prerequisites: Take SGD-113 or CIS-115(S21061)
Corequisites:
This course introduces the mobile simulation and game programming process. Topics include mobile simulation/game programming, performance tuning, animation, sound effects, music, and mobile networks. Upon completion, students should be able to apply simulation/game programming concepts to the creation of mobile simulations and games.

SGD-171 Flash Simulation and Game Programming 2 3 0 3
Prerequisites: Take SGD-111(S21240) or SGD-116
Corequisites:
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-174 Simulation and Game Level Design 2 3 0 3
Prerequisites: Take SGD-114;Take SGD-114;
Corequisites:
This course introduces the tools used to create levels for real-time simulation and games. Topics include level design, architecture theory, modeling for 3D engines and texturing methods. Upon completion, students should be able to design simple levels using industry standard tools.

SGD-192 Selected Topics in Simulation/Game Dev 1 2 0 2
Prerequisites:
Corequisites:
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.

SGD-193 Selected Topics in Simulation/Game Dev 2 2 0 3
Prerequisites:
Corequisites:
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.

SGD-212 Simulation and Game Development Design II 2 3 0 3
Prerequisites: Take SGD-112; Minimum grade C
Corequisites:
This course covers the advanced principles of simulation and game design. Topics include advanced design concepts in simulation and game development. Upon completion, students should be able to design an advanced simulation or game.

SGD-214 3D Modeling II 2 3 0 3
Prerequisites: Take SGD-114
Corequisites:
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-237 Rigging 3D Models 2 3 0 3
Prerequisites: Take SGD-114
Corequisites: SGD-162
This course covers the fundamentals of rigging 3D models for animation. Emphasis is placed on learning how to properly weight a model, rig it with a skeleton, and create fluid movement. Upon completion, students should be able to demonstrate the ability to properly rig 3D models.

SGD-244 3D Modeling III 2 3 0 3
Prerequisites: Take SGD-214
Corequisites:
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-268 Mobile Simulation and Game Programming II 2 3 0 3
Prerequisites: Take SGD-168(S23058)
Corequisites:
This course introduces advanced mobile simulation and game programming processes. Topics include advanced mobile simulation/game platforms, performance tuning, animation, sound effects, music, and mobile networks. Upon completion, students should be able to apply advanced simulation/game programming concepts to the creation of mobile simulations and games.

SGD-271 Advanced Flash Programming 2 3 0 3
Prerequisites: Take SGD-171
Corequisites:
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 Simulation and Game Level Design II 2 3 0 3
Prerequisites: Take SGD-174
Corequisites:
This course introduces the advanced tools used to create levels for real-time simulations and games. Topics include advanced level guide and architecture theory, concepts related to critical path" and "flow.

SGD-285 Simulation and Game Software Engineering 2 3 0 3
Prerequisites: Take 1 group; #Take SGD-212 CSC-134(S21066); #Take SGD-213(S23019) CSC-134(S21066); #Take SGD-214 CSC-134(S21066); #Take SGD-212 CSC-151; #Take SGD-213(S23019) CSC-151; #Take SGD-214 CSC-151; Take SGD-212 SGD-213
Corequisites:
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-288 Simulation and Game Development Portfolio Design 1 2 0 2
Prerequisites:
Corequisites: SGD-289
This course covers the organization and presentation of a simulation and game design portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

SGD-289 **Simulation and Game Development Project** 2 3 0 3
Prerequisites: Take 1 group; #Take SGD-212 SGD-163 SGD-164; #Take SGD-213(S21266) SGD-163 SGD-164; #Take SGD-214 SGD-163 SGD-164; #Take SGD-285(S22374) SGD-163 SGD-164; Take SGD-212 SGD-213(S21266) SGD-214 or SGD-285(S22374)
Corequisites:
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-292A **Selected Topics in SGD Interview Skills** 1 2 0 2
Prerequisites:
Corequisites: SGD-289
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.

SGD-293A **Selected Topics in Maya for 3Ds Max Use** 2 2 0 3
Prerequisites: Take SGD-114
Corequisites:
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.

SCIENTIFIC GRAPHICS (SGR Prefix)

SGR-110 **Scientific Graphics** 2 3 0 3
Prerequisites:
Corequisites:
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.

SGR-121 **Information Display Principles** 3 0 0 3
Prerequisites:
Corequisites:
This course covers psychological concepts relevant to the acquisition and processing of sensory information, focusing on the visual and auditory systems. Topics include pattern recognition, information encoding, learning, and problem solving and the application of these principles to the legibility and aesthetic quality of information displays. Upon completion, students should be able to evaluate the usability of information displays and incorporate the principles learned when designing such displays.

SGR-123 **Intro to Design Software** 2 3 0 3
Prerequisites:
Corequisites:
This course introduces software packages used for drawing, image manipulation, and three-dimensional modeling. Emphasis is placed on solving design problems through appropriate visual communication techniques and on using the packages in combination to produce final documents. Upon completion, students should be able to prepare informational graphics and images and create rendered three-dimensional models.

SGR-131 **Computer Graphics Concepts** 3 3 0 4
Prerequisites:
Corequisites: CIS-115
This course provides an overview of two- and three-dimensional graphics using polygonal models and introduces the use of graphics tool kits in computer programming. Topics include terminology, viewing systems, object properties,

illumination, shading, animation, and image manipulation, with introductory coverage of advanced modeling, rendering, and system construction techniques. Upon completion, students should be able to understand computer graphics fundamentals, program using a graphics tool kit, and be prepared for further study in computer graphics.

SGR-133 3-D Geometry 3 3 0 4
Prerequisites:
Corequisites:
This course covers descriptive and analytic geometry. Topics include lines, surfaces, and solids in three-dimensional space, revolutions, projections, and the associated mathematics. Upon completion, students should be able to demonstrate an understanding of the relationship between the graphical representation of geometry and its mathematical description.

SGR-142 Data Visualization I 2 3 0 3
Prerequisites: Take SGR-141(S20683)
Corequisites:
This course provides an introduction to data visualization through the use of mathematical and data visualization software packages. Topics include mathematical software packages, data visualization packages, spatial skills, and applications of visualization in science and technical fields. Upon completion, students should be able to understand graphical methods for representing data, creating multi-dimensional graphs, and be prepared to pursue further studies in visualization.

SGR-161 Intro to 3-D Design 1 4 0 3
Prerequisites:
Corequisites:
This course provides an introduction to three-dimensional design, modeling, and animation using an appropriate 3-D software package. Topics include an introduction to the user interface, primities, curves and surfaces, shaders, textures, lighting, animation, and rendering. Upon completion, students should be able to apply the techniques learned to create a simple animation and construct a small model.

SGR-162 Advanced 3-D Design 1 4 0 3
Prerequisites: Take SGR-161(S20688)
Corequisites:
This course provides further coverage of three-dimensional design, modeling, and animation techniques. Advanced concepts are applied to the topics covered in SGR 161 with additional topics involving inverse kinematics, character animation, clusters, and particle rendering. Upon completion, students should be able to present the the class a completed modeling or animation project.

SGR-225 Numerical Analysis 3 2 0 4
Prerequisites:
Corequisites:
This course covers the computation of numerical solutions of mathematical problems. Topics include numerical errors, series representations, integration and differentiation, root finding, solving linear systems, and curve fitting. Upon completion, students should be able to choose a method to solve a problem, apply that method, and compute the error associated with the solution.

SGR-231 Advanced Computer Graphics 3 3 0 4
Prerequisites: Take SGR-131
Corequisites:
This course provides further coverage of three-dimensional graphics, including advanced three-dimensional modeling and rendering techniques. Emphasis is placed on alternatives to polygonal modeling, including parametric surfaces, fractals, and particle systems, and illumination and rendering algorithms. Upon completion, students should be able to discuss the advantages and disadvantages of various types of models and control scene-rendering parameters.

SGR-233 Graphics Programming I 2 3 0 3
Prerequisites:
Corequisites: CIS-115
This course provides an overview of two- and three-dimensional computer graphics using polygonal models and

introduces graphics programming using an appropriate graphics software application. Topics include terminology, viewing systems, object properties, illumination, shading, animation, and image manipulation, with introductory coverage of advanced modeling, rendering, and system construction techniques. Upon completion, students should be able to understand computer graphics fundamentals, program using a graphics toolkit, and be prepared for further study in graphics programming.

SGR-234 Graphics Programming II 2 3 0 3
Prerequisites: Take SGR-233(S12487)
Corequisites:
This course provides additional coverage of graphics programming, focusing on the steps needed to construct a complete application using an appropriate graphics software application. Emphasis is placed on advanced topics such as blending, antialising, bitmaps, texture mapping, evaluators, and NURBS. Upon completion, students should be able to program common graphics algorithms and create an operational graphics application.

SGR-241 Visualization Survey 1 2 0 2
Prerequisites: Take SGR-141(S12370)
Corequisites:
This course explores applications of visualization. Emphasis is placed on visualization in practice as demonstrated by invited speakers, field trips, and through student presentations. Upon completion, students should be able to demonstrate an understanding of the use of visualization within a variety of disciplines.

SGR-242 Data Visualization II 2 3 0 3
Prerequisites: Take SGR-241;
Corequisites:
This course covers advanced topics in data visualization. Emphasis is placed on the graphical display of complex data obtained from simulations and from data collection. Upon completion, students should be able to independently design and create visualizations from data sets.

SGR-251 Data Visualization 3 4 0 5
Prerequisites: Take SGR-123(S12452) SGR-131 SGR-141(S12370)
Corequisites: SGR-121 SGR-225
This course covers advanced topics in data visualization. Emphasis is placed on the graphical display of complex data obtained from simulations and from data collection. Upon completion, students should be able to independently design and create visualizations for data sets.

SGR-261 Design Visualization 3 4 0 5
Prerequisites: Take SGR-123(S12452) SGR-131 SGR-141(S12370)
Corequisites: SGR-121
This course covers advanced topics in design and technical visualization. Emphasis is placed on applying visualization techniques to contribute to the understanding of plans, environments, objects, processes, and events. Upon completion, students should be able to independently design and create informational visualizations for scientific, technical, and design applications.

SGR-275 User Interfaces-Motif 2 3 0 3
Prerequisites: Take CSC-249(S11962)
Corequisites:
This course covers human-computer interface construction for UNIX software using X windows, Motif, and similar windowing/graphics tool kits. Topics include X Window system terminology, event handling, callback functions, and menu and dialog widgets. Upon completion, students should be able to construct interfaces that employ a hierarchy of widgets and that conform to the Motif style guide.

SGR-280 Visualization Project 1 6 0 4
Prerequisites: Take SGR-162(S10130) SGR-233(S12487) SGR-242(S10003)
Corequisites:
This course provides first-hand knowledge of how visualization fits into the knowledge acquisition and communication

process. Emphasis is placed on problem solving and portfolio development. Upon completion, student should be able to plan, schedule, and complete a project and present their work in a professional manner.

SGR-289 Visualization Project 1 8 0 5
Prerequisites: Take SGR-251 SGR-261 or SGR-271
Corequisites:
This course provides first-hand knowledge of how visualization fits into the knowledge acquisition and communication process. Emphasis is placed on problem solving and portfolio development. Upon completion, students should be able to plan, schedule, and complete a project and present their work in a professional manner.

SOCIOLOGY (SOC Prefix)

SOC-210 Introduction to Sociology 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

SOC-213 Sociology of the Family 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #ake DRE-098(S23643)
Corequisites:
This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change.

SOC-220 Social Problems 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems.

SOC-225 Social Diversity 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

SOC-230 Race and Ethnic Relations 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course includes an examination of the various aspects of race and ethnicity and how these lead to different experiences, opportunities, problems, and contributions. Topics include prejudice, discrimination, perceptions, myths, stereotypes, and intergroup relationships. Upon completion, students should be able to identify and analyze relationships among racial and ethnic groups within the larger society.

SOC-234 Sociology of Gender 3 0 0 3
Prerequisites: Take ENG-090 RED-090
Corequisites:
This course examines contemporary roles in society with special emphasis on recent changes. Topics include sex role socialization, myths and stereotypes, gender issues related to family, work, and power. Upon completion, students should be able to analyze modern relationships between men and women.

SOC-242 Sociology of Deviance 3 0 0 3
Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
This course provides an overview of deviant behavior and the processes involved in its definition, causation, prevention, control, and treatment. Topics include theories of causation, social control, delinquency, victimization, criminality, the criminal justice system, punishment, rehabilitation, and restitution. Upon completion, students should be able to identify and analyze issues surrounding the nature and development of social responses to deviance.

SOC-245 Drugs and Society 3 0 0 3
Prerequisites: Take RED-090 SOC-210
Corequisites:
This course covers the impact of drugs on society and human behavior. Emphasis is placed on the construction of a modern social problem from contrasting historical responses to mind-altering substances. Upon completion, students should be able to apply sociological analysis in evaluating drug use as a societal and interpersonal problem.

SOC-252 Sociology of Work 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
Corequisites:
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.

SPANISH (SPA Prefix)

SPA-111 Elementary Spanish I 3 0 0 3
Prerequisites: Take 1 group; #Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
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.

SPA-112 Elementary Spanish II 3 0 0 3
Prerequisites: Take SPA-111; Minimum grade C
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: Take 1 group; # Take RED-090 ENG-090; #Take ENG-110(S22173); #Take ENG-111(S13673); #Take DRE-097(S23642)
Corequisites:
This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

SPA-161 Cultural Immersion 2 3 0 3
Prerequisites: Take SPA-111
Corequisites:
This course explores Hispanic culture through intensive study on campus and field experience in a host country or comparable area within the United States. 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: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111(S13673); #Take DRE-098(S23643)
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.

SPA-182 Spanish Lab 2 0 2 0 1
Prerequisites: Take SPA-181; Minimum grade C
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: Take SPA-112; Minimum grade C
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: Take 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-281 Spanish Lab 3 0 2 0 1
Prerequisites: Take SPA-182; Minimum grade C
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: Take 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 (SRV Prefix)

SRV-110 Surveying I 2 6 0 4
Prerequisites:
Corequisites:
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-110 Surveying I 2 6 0 4
Prerequisites:
Corequisites:
This course introduces the theory and practice of plane surveying. Topics include the precise measurement of distances, angles, and elevations; bearing, azimuth and traverse computations; topography and mapping. Upon completion, students should be able to use/care for surveying equipment, collect field survey data, perform traverse computations and create a contour map.

SRV-111 Surveying II 2 6 0 4
Prerequisites: Take SRV-110(S23505) CIV-125(S21521);
Corequisites:
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-210 Surveying III 2 6 0 4
Prerequisites: Take CIV-125(S21521) SRV-110(S22362); Take SRV-110(S12339)
Corequisites:
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: Take MAT-121(S20804)
Corequisites:
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: Take SRV-110(S12339)
Corequisites:
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-240 Topo/Site Surveying 2 6 0 4
Prerequisites: Take CIV-125(S21521) SRV-110(S22362); Take SRV-110(S12339)
Corequisites:
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-250 Advanced Surveying 2 6 0 4
Prerequisites: Take SRV-111 GIS-112(S20399)
Corequisites:
This course covers advanced topics in surveying. Topics include photogrammetry, astronomical observations, coordinate systems, error theory, GPS, GIS, Public Land System, and other related topics. Upon completion, students should be able to apply advanced techniques to the solution of complex surveying problems.

SRV-260 **Field & Office Practices** 1 3 0 2
Prerequisites: Take CEG-115 SRV-111
Corequisites:
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.

SUSTAINABILITY TECHNOLOGY (SST Prefix)

SST-110 **Introduction to Sustainability** 3 0 0 3
Prerequisites:
Corequisites:
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.

SST-140 **Green Building and Design Concepts** 3 0 0 3
Prerequisites:
Corequisites:
This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion, students should be able to identify the principles and practices of sustainable building design and construction.

SURGICAL TECHNOLOGY (SUR Prefix)

SUR-110 **Intro to Surgical Technology** 3 0 0 3
Prerequisites:
Corequisites: SUR-111
This course provides a comprehensive study of peri-operative care, patient care concepts, and professional practice concepts within the profession of surgical technology. Topics include: introductory concepts, organizational structure and relationships, legal, ethical and moral issues, medical terminology, pharmacology, anesthesia, wound healing management concepts, and the technological sciences. Upon completion, students should be able to apply theoretical knowledge of the course topics to the practice of surgical technology.

SUR-111 **Periop Patient Care** 5 6 0 7
Prerequisites:
Corequisites: SUR-110
This course provides the surgical technology student the theoretical knowledge required to function in the pre-operative, intra-operative, and post-operative role. Topics include asepsis, disinfection and sterilization, physical environment, instrumentation, equipment, peri-operative patient care, and peri-operative case management. Upon completion, students should be able to apply the principles and practice of the peri-operative team member to the operative environment.

SUR-122 **Surgical Procedures I** 5 3 0 6
Prerequisites: Take SUR-110(S21499) SUR-111(S14251)
Corequisites: SUR-123 STP-101
This course provides an introduction to selected basic and intermediate surgical specialties that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

SUR-123 **Sur Clinical Practice I** 0 0 21 7
Prerequisites: Take SUR-110(S23183) SUR-111(S23184)
Corequisites: SUR-122 SUR-122 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: Take SUR-123 or STP-101(S11785)
Corequisites:
This course provides a comprehensive study of intermediate and advanced surgical specialties that students are exposed to in the second clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

SUR-135 **SUR Clinical Practice II** 0 0 12 4
Prerequisites: Take SUR-123
Corequisites: SUR-134
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 **Prof Success Prep** 1 0 0 1
Prerequisites: Take SUR-123
Corequisites: SUR-134 SUR-135
This course provides employability skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, interviewing strategies, communication skills, and teamwork concepts. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.

SUR-210 **Advanced Sur Clinical Practice** 0 0 6 2
Prerequisites:
Corequisites:
This course is designed to provide individualized experience in advanced practice, education, circulating, and managerial skills. Emphasis is placed on developing and demonstrating proficiency in skills necessary for advanced practice. Upon completion, students should be able to assume leadership roles in a chosen specialty area.

SUR-211 **Advanced Theoretical Concepts** 2 0 0 2
Prerequisites:
Corequisites:
This course covers theoretical knowledge required for extension of the surgical technologist role. Emphasis is placed on advanced practice in complex surgical specialties, educational methodologies, and managerial skills. Upon completion, students should be able to assume leadership roles in a chosen specialty area.

SOCIAL WORK (SWK Prefix)

SWK-110 **Intro to Social Work** 3 0 0 3
Prerequisites:
Corequisites:
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:
Corequisites:
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)

TNE-111 Campus Networks I 2 3 0 3
Prerequisites:
Corequisites:
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-193 Selected Topics in Telecommuncations 3 0 0 3
Prerequisites:
Corequisites:
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.

TNE-250 Introduction to Telecom Networks 2 3 0 3
Prerequisites:
Corequisites:
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.

TRANSPORTATION TECHNOLOGY (TRN Prefix)

TRN-110 Introduction to Transport Technology 1 2 0 2
Prerequisites:
Corequisites:
This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.

TRN-120 Basic Transportation Electricity 4 3 0 5
Prerequisites:
Corequisites:
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.

TRN-120A **Basic Transportation Electrical Lab** 0 3 0 1
Prerequisites:
Corequisites: TRN-120
This course provides a lab that allows students to enhance their understanding of electrical components and circuits used in the transportation industry. Topics include inspection, diagnosis, and repair of electrical components and circuits using appropriate service information for specific transportation systems. Upon completion, students should be able to diagnose and service electrical components and circuits used in transportation systems.

TRN-130 **Intro to Sustainable Transportation** 2 2 0 3
Prerequisites:
Corequisites:
This course provides an overview of alternative fuels and alternative fuel vehicles. Topics include composition and use of alternative fuels including compressed natural gas, biodiesel, ethanol, hydrogen, and synthetic fuels, hybrid/electric, and vehicles using alternative fuels. Upon completion, students should be able to identify alternative fuel vehicles, explain how each alternative fuel delivery system operates, and perform minor repairs.

TRN-140 **Transportation Climate Control** 1 2 0 2
Prerequisites:
Corequisites:
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems.

TRN-140A **Transportation Climate Control Lab** 1 2 0 2
Prerequisites:
Corequisites: TRN-140
This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.

TRN-170 **Pc Skills for Transportation** 1 2 0 2
Prerequisites:
Corequisites:
This course introduces students to personal computer literacy and Internet literacy with an emphasis on the transportation service industry. Topics include service information systems, management systems, computer-based systems, and PC-based diagnostic equipment. Upon completion, students should be able to access information pertaining to transportation technology and perform word processing.

WORK-BASED LEARNING (WBL Prefix)

WBL-111 **Work-Based Learning I** 0 0 0 1
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-112 **Work-Based Learning I** 0 0 0 2
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon

completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-113 Work-Based Learning I 0 0 0 3
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-115 Work-Based Learning Seminar I 1 0 0 1
Prerequisites:
Corequisites:
This course description may be written by the individual colleges.

WBL-121 Work-Based Learning II 0 0 0 1
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-122 Work-Based Learning II 0 0 0 2
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-123 Work-Based Learning II 0 0 0 3
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-131 Work-Based Learning III 0 0 0 1
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-132 Work-Based Learning III 0 0 0 2
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL-133 Work-Based Learning III 0 0 0 3
Prerequisites:
Corequisites:
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WEB TECHNOLOGIES (WEB Prefix)

WEB-110 Internet/Web Fundamentals 2 2 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP, and other related topics. Upon completion, students should be able to deploy a hand-coded website created with mark-up language, and effectively use and understand the function of search engines.

WEB-111 Introduction to Web Graphics 2 2 0 3
Prerequisites: Take DRE-098(S23643)
Corequisites:
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: Take WEB-110(S22058) CIS-172 CIS-115(S21061) or CSC-151
Corequisites:
This course introduces Worldwide Web Consortium (W3C) standard client-side Internet programming using industry-established practices. Topics include JavaScript, markup elements, stylesheets, validation, accessibility, standards, and browsers. Upon completion, students should be able to develop hand-coded web pages using current markup standards.

WEB-120 Introduction to Internet Multimedia 2 2 0 3
Prerequisites: Take WEB-111(S22416)
Corequisites:
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: Take WEB-110(S22058) WEB-140
Corequisites:
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: Take DRE-098(S23643) DMA-050
Corequisites:
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: Take 1 group; #Take RED-090 MAT-060; #Take RED-090 DMA-050
Corequisites:
This course covers current design standards and emerging approaches related to the design and development of user interfaces for mobile devices. Emphasis is placed on research and evaluation of standard and emerging practices for effective interface and user experience design. Upon completion, students should be able to design effective and usable interfaces for mobile devices.

WEB-151 Mobile Application Development I 2 2 0 3
Prerequisites: Take CSC-151
Corequisites:
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-179 JAVA Web Programming 2 3 0 3
Prerequisites:
Corequisites:
This course introduces the development of dynamic, database-driven web applications using the JAVA programming languages. Topics include Object Oriented Programming JAVA Server Pages, servlets, database interactions, and form handling. Upon completion, students should be able to create and modify JAVA-based internet applications.

WEB-180 Active Server Pages 2 2 0 3
Prerequisites: Take CIS-115(S21061)
Corequisites:
This course introduces active server programming. Topics include HTML forms processing and other issues related to developing active web applications. Upon completion, students should be able to create and maintain a dynamic website.

WEB-182 PHP Programming 2 2 0 3
Prerequisites: Take CIS-115(S21061)
Corequisites:
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-185 ColdFusion Programming 2 2 0 3
Prerequisites: Take CIS-115(S21061)
Corequisites:
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-187 Programming for Mobile Devices 2 2 0 3
Prerequisites: Take CIS-115(S21061)
Corequisites:
This course introduces content development for mobile electronic devices with a focus on business-related, social media, and entertainment applications. Emphasis is placed on developing web content and creating applications for mobile devices, including internet/business practices and techniques for delivery on mobile platforms. Upon completion, students should be able to develop web content and business or entertainment applications for use on mobile electronic devices.

WEB-193 Selected Topics in Web Technology 2 2 0 3
Prerequisites: Take ITN-140 or WEB-140;Take ITN-140 or WEB-140;
Corequisites:
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.

WEB-210 Web Design 2 2 0 3
Prerequisites: Take WEB-140
Corequisites:
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.

WEB-211 Advanced Web Graphics 2 2 0 3
Prerequisites: Take 1 group; #Take WEB-111(S22416) WEB-110(S22058); #Take ITN-110 WEB-110(S21129); Take WEB-111(S22416)
Corequisites:
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-213 Internet Marketing and Analytics 2 2 0 3
Prerequisites: Take WEB-110(S22058) WEB-140
Corequisites:
This course introduces students to Search Engine Optimization (SEO), Search Engine Marketing (SEM) and web analytics. Topics include Search Engine Optimization (SEO), Pay Per Click advertising (PPC), Search Engine Marketing (SEM), web analytics, eye-tracking software and email marketing. Upon completion, students should be able to set up, monitor and maintain SEO optimized websites; and develop strategies for online marketing and advertizing plans.

WEB-214 Social Media 2 2 0 3
Prerequisites: Take ENG-111(S13673) WEB-140
Corequisites:
This course introduces students to social media for organizations. Topics include social media, marketing strategy, brand presence, blogging, social media analytics and technical writing. Upon completion, students should be able to utilize popular social media platforms as part of a marketing strategy, and work with social media analytics tools.

WEB-215 Advanced Markup and Scripting 2 2 0 3
Prerequisites: Take WEB-115(S21130)
Corequisites:
This course covers advanced programming skills required to design Internet applications. Emphasis is placed on programming techniques required to support Internet applications. Upon completion, students should be able to design, code, debug, and document Internet-based programming solutions to various real-world problems using an appropriate programming language.

WEB-225 Content Management Systems 2 2 0 3
Prerequisites: Take WEB-110(S22058)
Corequisites:
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-250 Database Driven Websites 2 2 0 3
Prerequisites: Take DBA-110 WEB-115(S22059)
Corequisites:
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 Development II 2 2 0 3
Prerequisites: Take WEB-151;Take WEB-151;
Corequisites:
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: Take WEB-250(S22280) WEB-182; Take WEB-250(S21132);Take WEB-250(S22280) WEB-182;Take WEB-250(S21132);
Corequisites:
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-287 Web E-Portfolio 1 2 0 2
Prerequisites: Take WEB-140;Take WEB-140;
Corequisites:
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-298A Seminar in Web Technology 2 2 0 3
Prerequisites:
Corequisites:
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)

WLD-110 Cutting Processes 1 3 0 2
Prerequisites:
Corequisites:
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:
Corequisites:
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:
Corequisites:
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: Take WLD-115(S10891) WLD-121(S13138)
Corequisites:
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:
Corequisites:
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-122 GMAW (MIG) Plate/Pipe 1 6 0 3
Prerequisites: Take WLD-121(S13138) WLD-115(S10891)
Corequisites:
This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry.

WLD-131 GTAW (TIG) Plate 2 6 0 4
Prerequisites: Take WLD-115(S10891)
Corequisites:
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: Take WLD-131(S10437) WLD-121(S13138)
Corequisites:
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.

WLD-141 Symbols and Specifications 2 2 0 3
Prerequisites:
Corequisites:
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-141 Symbols & Specifications 2 2 0 3
Prerequisites:
Corequisites:
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: Take WLD-115(S10891) WLD-141(S11462) WLD-110(S10913)
Corequisites:
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-251 **Fabrication II** 1 6 0 3
Prerequisites: Take WLD-151(S11114)
Corequisites:
This course covers advanced fabrication skills. Topics include advanced layout and assembly methods with emphasis on the safe and correct use of fabrication tools and equipment. Upon completion, students should be able to fabricate projects from working drawings.

WLD-261 **Certification Practices** 1 3 0 2
Prerequisites: Take WLD-115(S10891) WLD-121(S13138) WLD-131(S10437)
Corequisites:
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.

WLD-262 **Inspection & Testing** 2 2 0 3
Prerequisites: Take WLD-116
Corequisites:
This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.

CAMPUS LOCATIONS AND CONTACT INFORMATION

CAMPUSES AND CENTERS

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, where the college first started offering classes in 1963, is the center of college operations. The campus offers daytime, evening, and weekend class options in credit and non-credit programs, including the Associate in Arts and Associate in Science degree programs for college/university transfer. Main Campus is also home to technical programs such as architecture, automotive, culinary arts, cosmetology, computers, and more. An extensive library, an individualized learning center, computer labs, a bookstore, and a restaurant are part of the Main Campus experience, and services for students include advising and counseling, disability support, and career and employment resources. The Main Campus gymnasium hosts basketball and volleyball games for Wake Tech Eagles teams and fans!

NORTHERN WAKE CAMPUS
6600 Louisburg Road
Raleigh, North Carolina 27616
919-532-5502
http://northerncampus.waketech.edu

The 127-acre Northern Wake Campus sits on rolling hills and seems well connected to its surroundings – the result of meticulous planning and inspired design. Northern Wake has the distinction of being the first college campus in the nation to have all buildings LEED (Leadership in Energy and Environmental Design) certified by the U.S. Green Building Council. Visitors comment on the serene setting and abundance of natural light. The campus offers the Associate in Arts and Associate in Science degrees for college transfer as well as evening and weekend continuing education classes. The campus is also home to classes for students in the Wake Early College High School. Student services include admissions, counseling, and financial aid, and the campus has a library, chemistry and biology labs, a bookstore, and tennis and volleyball courts.

WESTERN WAKE CAMPUS
Millpond Village
3434 Kildaire Farm Road
Cary, North Carolina, 27511
919-335-1000
http://westerncampus.waketech.edu

The Western Wake Campus is home to Wake Tech's Business and Industry Services Division, providing customized corporate training, professional development, apprenticeship, and entrepreneurship programs – as well as small business support. Western Wake offers the Associate in Arts degree program for college transfer, along with non-credit classes in human resources development, computer skills, art, horticulture, ESL, online GED preparation, and more. Support services include a library, computer lab, tutoring, and financial aid.

PERRY HEALTH SCIENCES CAMPUS
2901 Holston Lane (behind Wake Medical Center)
Raleigh, North Carolina 27610
919-747-0400
http://healthsciencescampus.waketech.edu

Wake Tech's Perry Health Sciences Campus, adjacent to WakeMed, is a state-of-the-art facility offering credit and non-credit programs that prepare students for careers in nursing, dental hygiene, therapeutic massage, emergency medical services, and many other allied health professions. Wake Tech partners with Wake Med and other local health care institutions to provide students with extensive opportunities for hands-on training and co-op work experiences. The Perry Health Sciences Campus is also home to the Wake Early College of Health and Sciences.

PUBLIC SAFETY EDUCATION CAMPUS
321 Chapanoke Road
Raleigh, North Carolina 27603
919-866-6100
http://www.waketech.edu/about-wake-tech/locations/public-safety-education-campus

Wake Tech's Public Safety Education Campus is one of the most advanced facilities in the country, with cutting-edge training features that include a forensics lab and a mock courtroom and jail. The campus trains law enforcement and corrections officers, fire and rescue personnel, EMS technicians, and SBI and Homeland Security personnel. The campus also provides short-term training programs for Certified Nursing Assistant, hospitality, HVAC, and computer networking – all high-demand fields with promising job prospects. The PSEC has full campus accreditation, with an on-campus library, individualized learning center, and student services office. It is the only North Carolina Community College campus to be certified by the Commission on Accreditation for Law Enforcement Agencies (CALEA).

FUTURE RTP CAMPUS
Near Perimeter Park, Morrisville

Wake Tech has purchased 96 acres in Morrisville, NC (near I-40 and 540), as the site of its next expansion. Situated near high-tech industry giants, the site will allow Wake Tech to provide corporate training and business-related services more effectively as well as college transfer programs. Preliminary plans include up to nine buildings, with the capacity to serve up to 7,000 students.

ADULT EDUCATION CENTER
1920 Capital Boulevard
Raleigh, North Carolina 27604
919-334-1500
http://basicskills.waketech.edu/

The Adult Education Center (AEC) houses Wake Tech's Basic Skills program, the largest in North Carolina. The program includes GED, Adult High School, and the High School Equivalency Program (HEP), designed to help adults improve math, reading, and writing skills. Basic Skills also includes English as a Second Language (ESL) classes and Compensatory Education for adults with intellectual disabilities.

EASTERN WAKE EDUCATION CENTER
519 Industrial Drive
Zebulon, North Carolina 27597

The Eastern Wake Education Center provides non-credit training for residents living in the eastern part of Wake County. Classes include job search skills and career readiness classes (fee-waived for the unemployed or underemployed); high school equivalency diploma preparation; Notary Public education; vocational classes taught in English and Spanish; and sustainability classes, including energy audit training in Wake Tech's BPI Test Center.

OTHER LOCATIONS

STATE LEARNING AND DEVELOPMENT CENTER
101 West Peace Street
Raleigh, North Carolina 27603
919-733-2474

Wake Tech partners with the North Carolina Office of Human Resources to make computer software and technology training available to state employees. Wake Tech instructors teach short courses, curriculum classes, and online courses on the most current software programs, with a focus on those used throughout state government. www.oshr.nc.gov/train.

BIONETWORK CAPSTONE CENTER
NC State University
850 Oval Drive
Raleigh, North Carolina 27695
919-515-0232

Wake Tech provides hands-on training in a simulated biomanufacturing facility with state-of-the-art classrooms, industrial grade equipment laboratories, and a certified cleanroom suite. Courses taught by industry experts focus on biomanufacturing skills sets, including good manufacturing practices (GMP), aseptic manufacturing, operations in biotechnology processes, industrial microbiology, good laboratory practices (GLP), HPLC, and validation. The Capstone Center is part of the statewide BioNetwork program. www.ncbionetwork.org/facilities/capstone-center.

CAMPUS LOCATIONS AND CONTACT INFORMATION

CONTACT INFORMATION

SERVICE/LOCATION	WEB ADDRESS	PHONE
Main Campus: 9101 Fayetteville Road (401 S), Raleigh, NC 27603	http://www.waketech.edu/about-wake-tech/locations/main-campus	919-866-5000
PerryHealth Sciences Campus: 2901 Holston Lane, Raleigh, NC 27610	http://www.waketech.edu/about-wake-tech/locations/health-sciences-campus	919-747-0400
Western Wake Campus: 3434 Kildaire Farm Road, Cary, NC 27518	http://www.waketech.edu/about-wake-tech/locations/western-wake-campus	919-335-1000
Future RTP Campus: Paramount Parkway, Morrisville, NC 27560	http://www.waketech.edu/about-wake-tech/locations/rtp-campus	919-866-5000
Northern Wake Campus: 6600 Louisburg Road Raleigh, NC 27616	http://www.waketech.edu/about-wake-tech/locations/northern	919-532-5502 or 5501
Public Safety Education Campus (PSEC): 321 Chapanoke Rd, Raleigh, NC 27603	http://www.waketech.edu/about-wake-tech/locations/public-safety-education-campus	919-866-6100
Adult Education Center: 1920 Capital Boulevard, Raleigh, NC 27604	http://www.waketech.edu/about-wake-tech/locations/adult-education-center	919-334-1500
State Learning and Development Center: 101 West Peace Street, Raleigh, NC 27603	http://www.osp.state.nc.us/train.htm	919-733-2474
Eastern Wake Education Center (EWEC): 519 Industrial Drive, Zebulon, NC 27597	http://www.waketech.edu/about-wake-tech/locations/eastern-wake-educational-center	919-866-5727
Bionetwork Capstone Center	www.ncbionetwork.org/facilities/capstone-center	919-515-0232
General Information	http://www.waketech.edu/	919-866-5500
Calendars/Deadlines	http://www.waketech.edu/calendar/	919-866-5500
Admissions	http://admissions.waketech.edu/	919-866-5000
Advising	http://www.waketech.edu/student-services/advising	919-866-5000
Basic Skills (GED, Adult High School, etc.)	http://basicskills.waketech.edu/	919-866-5280 919-334-1500
Campus Police	http://www.waketech.edu/about-wake-tech/administrative-offices/campus-police	919-866-5911
Continuing Education	http://conted.waketech.edu/	919-866-5800
Curriculum Education	http://curred.waketech.edu/	919-866-5000
eLearning	http://www.waketech.edu/student-services/online-learning	919-866-5618
Career and College Promise Program	http://admissions.waketech.edu/index.php?page=procedures_highschool	919-866-5425
Wake Technical Community College Foundation, Inc.	http://foundation.waketech.edu/	919-866-5924
ITS Services and Support (Helpdesk/WebAdvisor/student portal, etc.)	http://its.waketech.edu/service.php	919-866-7000
Open Computer Labs	http://www.waketech.edu/student-services/computer-labs	919-866-5119

CAMPUS LOCATIONS AND CONTACT INFORMATION

Main Campus Information

SERVICE	MAIN CAMPUS (401 South)	PHONE
Advising	Student Services, Room 121 http://advising.waketech.edu/	919-866-5474
Campus Police	Student Services, 233 http://www.waketech.edu/about-wake-tech/administrative-offices/campus-police	919-866-5911
Career and Employment Resources	Library Education, Room 40 http://careers.waketech.edu	919-866-5695
Cashier's Office	Holding Hall, Room 111	919-866-5900
College Bookstore	Beside Student Services Bldg. http://www.waketech.edu/student-services/wake-tech-bookstore	919-772-4204
Open Computer Labs Student ID required	ILC 124 http://www.waketech.edu/student-services/computer-labs	919-866-5119 *Additional computer resources are available at each library and ILC location)
Continuing Education Registration	http://www.waketech.edu/programs-courses/non-credit/register-online	919-866-5800
Cooperative Education	Holding Hall, Room 108C http://www.waketech.edu/about-wake-tech/careers-employment/careers	919-866-5694
Student Success Counseling	Student Services, Room 137 http://www.waketech.edu/studentsuccess.waketech.edu	919-866-5460
Disability Support Services	Holding Hall, Room 124 http://www.waketech.edu/student-services/disability-support-services	919-866-5670
Financial Aid	Student Services, Room 015 http://www.waketech.edu/student-services/financial-aid	919-866-5410
Individualized Learning Center (ILC) (Reading, Writing, Math)	ILC Building (Student ID required) http://www.waketech.edu/student-services/individualized-learning-center	919-866-5276
Library *(open computer areas) Student ID required	Library Education, First Floor http://www.waketech.edu/student-services/libraries	919-866-5644
Photo I.D.	Student Services Building, Room 128 http://www.waketech.edu/student-life/student-activities/college-id-badges	919-866-5405
Registration & Student Records Services (Curriculum Education)	Student Services Building, Room 254 http://www.waketech.edu/student-services/registration-student-records	919-866-5700
SGA (Student Activities)	Student Services Building, Room 143 http://www.waketech.edu/student-life/student-government-association	919-866-5407
Veteran's Information	Student Services Building, Room 019 http://www.waketech.edu/student-services/veterans-affairs	919-866-5417

CAMPUS LOCATIONS AND CONTACT INFORMATION

Northern Wake Campus Information

SERVICE	NORTHERN WAKE CAMPUS (401 North)	PHONE
Advising/Admissions	Bldg. A – 2nd Floor Front Desk	919-532-5502
Campus Police	Bldg. B- Room 234	919-866-5911
Cashier's Office	Bldg. A - Room 236	919-532-5507
College Bookstore	Bldg. B - Room 225 or online at http://www.waketech.edu/student-services/wake-tech-bookstore	919-790-9306
Student Success Counseling	Bldg. A – 2nd Floor Front Desk	919-532-5502
Disability Support Services:	Bldg. A – Room 218D	919-532-5505
eLearning	Bldg. E, - Room 250	919-532-5830
Financial Aid	Bldg. A - Room 322	919-532-5504
Individualized Learning Center (Reading, Writing, Math tutoring) Student I.D. Required	Bldg. B - Room 213 http://www.waketech.edu/student-services/individualized-learning-center	919-532-5548
Library Student I.D. Required	Bldg. B - Room 239 http://www.waketech.edu/student-services/libraries	919-532-5550
Photo I.D. and Parking Decals	Bldg. A - Room 133	919-532-5573
Registration & Student Records Services	Bldg. A - 2nd Floor Front Desk	919-532-5574
SGA (Student Activities)	Bldg. D - Room 206B	919-532-5654
OPEN COMPUTER AREAS		
Northern Wake Library Student I.D. Required	Bldg. B - Room 239 http://www.waketech.edu/student-services/libraries	919-532-5550
Open Computer Lab Student I.D. Required	Bldg. B - Room 216 http://www.waketech.edu/student-services/computer-labs	919-532-5584 *Additional computer resources are available at each library and ILC location)
CONTINUING EDUCATION		
Registration	Bldg. D - Room 230 (Front Desk)	919-532-5501
Online Classes www.ed2go.com/waketech	Bldg. D - Room 323	919-532-5581

CAMPUS LOCATIONS AND CONTACT INFORMATION

Perry Health Science Campus Information

SERVICE	HEALTH SCIENCE CAMPUS	PHONE
Advising/Admissions	Student Services Center, Rooms 7-11	919-747-0402
Campus Police	HS 502	919-866-5911
Cashier's Office	Health Education Bldg. – Room 128F	919-747-0010
Student Success Counseling	HS2 Building, Room 110	919-747-0402
Disability Support Services:	Student Service Center, Room 07	919-747-0406
Financial Aid	Student Service Center Room 04	919-747-0106
Individualized Learning Center (Reading, Writing, Math, Computer and Health Science Skills lab, & tutoring) Student I.D. Required	HEB 208 http://www.waketech.edu/student-services/individualized-learning-center	919-747-0233
Library	Health Education Bldg. Room 123 http://www.waketech.edu/student-services/libraries	919-747-0002
Photo ID	Student Service Center Front Desk	919-747-0402
Registration & Student Records Services	Student Services Center (Limited Services)	919-747-0402
SGA (Student Activities)	HS2, Room 157	919-747-0092
OPEN COMPUTER AREAS		
Health Sciences Library Student I.D. Required Microsoft Office Available	Health Education Bldg. Room 123 http://www.waketech.edu/student-services/libraries	919-747-0002
Open Computer Lab Student ID Required Microsoft Office and other applications available	Health Science Bldg. Room 514 http://www.waketech.edu/student-services/computer-labs	919-335-1042 *Additional computer resources are available at each library and ILC location)
CONTINUING EDUCATION		
Registration	Health Education Building	919-747-0400

CAMPUS LOCATIONS AND CONTACT INFORMATION

Western Wake Campus Information

SERVICE	WESTERN WAKE CAMPUS	PHONE
Admissions/Advising/Student Success Counseling	Room 255	919-335-1059
Campus Police	(contact 1st floor receptionist) http://www.waketech.edu/about-wake-tech/administrative-offices/campus-police	919-866-5911
Cashier's Office	Room 100A	919-335-1049
Financial Aid	Room 255	919-335-1040
Individualized Learning Center (Reading, Writing, Math, and Computer tutoring) Student I.D. Required	Learning Resource Center , Suite 200E http://www.waketech.edu/student-services/individualized-learning-center	919-335-1028
Library **Student ID required**	Learning Resource Center, Suite 200B http://www.waketech.edu/student-services/libraries	919-335-1029
Open Computer Lab Student I.D. Required	Room 254 http://www.waketech.edu/student-services/computer-labs	919-335-1045 *Additional computer resources are available at each library and ILC location)
Photo I.D.	Room 254	919-335-1045
Student Lounge	Room 261	
CONTINUING EDUCATION		
Registration (Continuing Education)	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

CAMPUS LOCATIONS AND CONTACT INFORMATION

Public Safety Education Campus Information

SERVICE	PUBLIC SAFETY EDUCATION CAMPUS	PHONE
Admissions/Advising/Student Success Counseling	Room 1716 W, Th 8 a.m. – 5 p.m.	919-866-5468
Campus Police	Room 1428 M-F, 8 a.m. – 5 p.m.	919-866-5911
Cashier's Office	Room 1718 M-F, 8 a.m. – 5 p.m.	919-866-6108
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 Computer tutoring) Student I.D. Required	Room 1611 http://www.waketech.edu/student-services/individualized-learning-center	919-866-6123
Library **Student ID Required**	Room 1615 M-F, 9 a.m. 3 p.m. http://www.waketech.edu/student-services/libraries	919-866-6107
Photo ID	Front Desk M-F, 8 a.m. – 4:30 p.m.	919-866-6101

CREDENTIALS DIRECTORY

BOARD OF TRUSTEES

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, 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.

Jim W. Perry, *Chair*
Harvey L. Montague, *Vice Chair*

Richard J. Boyd
Linda D. Coleman
Doris D. Huebner
Thomas F. Looney
Sheila H. Ogle
Edward D. Paradise
David S. Robinson
Gary J. Salamido
Valentina Scribner
Ronald G. Wainwright Jr.
Rye Robinson, *SGA President*

OFFICE OF THE PRESIDENT

Stephen C. Scott, Ed.D ..... **President**
Jackie M. Jones, M.Ed. ..... Executive Assistant to the President

OFFICE OF THE EXECUTIVE VICE PRESIDENT

Gerald A. Mitchell, M.S. ..... **Executive Vice President**
Vickie D. Jones ..... Administrative Assistant to the Executive Vice President

PRESIDENT'S STAFF

Arthur W. Andrews, M.B.A. ..... Senior Vice President of Financial & Business Services
Anthony Caison, M.B.A. ..... Vice President, Continuing Education Services
Benita Clark, M.A. ..... Associate Vice President, Human Resources
Laurie C. Clowers, B.A. ..... Vice President, Communications & Public Relations
O. Morton Congleton, B.A. ..... Executive Vice President, Foundation, College Development & Communications
Wendell B. Goodwin, B.S. ..... Facility Engineering Officer, Facility Operations
D. Gayle Greene, Ed.D. ..... Senior Vice President, Northern Wake Campus
Robert H. Grove, B.S. ..... Associate Vice President for Creativity, Sustainability & College Development
Clay T. Hines, J.D. ..... General Counsel & Vice President, Legal Services
Rita H. Jerman, M.Ed. ..... Senior Vice President, Student Services
Michael Penry, M.A. ..... Chief of Police
Bryan K. Ryan, M.A. ..... Senior Vice President, Curriculum Education Services
Samuel Strickland III, M.A. ..... Senior Vice President, Economic & Workforce Development

CREDENTIALS DIRECTORY

Curriculum and Continuing Education Faculty
(this section last updated 5/12/2014)

Albahrawy, Diane, J.D. ..... *Instructor, Business Administration*

Albing, Virginia A., M.A. ..... *Instructor/Coordinator, Individualized Learning Center, Basic Skills*

Albright, Tammy, A.A.S., CMA (AAMA) ..... *Associate Professor, Medical Assisting*

Alford, Latisha, M.S. . ..... *Instructor, Human Resources Development*

Algood, Willeena J., M.Ed, R.N. . ..... *Professor, Nursing*

Allen, DeeDee A., Ph.D. . ..... *Associate Professor, Chemistry*

Allen, Kathryn, Ph.D. ..... *Instructor/Coordinator, Transitions*

Allen, Phyllis A., B.S. ..... *Assistant Professor, Pre-Curriculum Mathematics*

Alston, Estelle M., B.S.,R.T. (R)(CT)ARRT ..... *Instructor, Radiography Skills Laboratory*

Anderton-Brown, Alecia, M.S. ..... *Instructor, Networking Technology*

Annis, John G., M.P.A. ..... *Associate Professor, Criminal Justice*

Appel, Kimberly P., M.A. ..... *Instructor, Psychology*

Archambault, Michel B., M.S. ..... *Instructor/Recruiter/Retention Specialist*

Arias, Hugo, B.S. ..... *Instructor/Coordinator HEP*

Arias, Sophia, M.A. ..... *Instructor, Philosophy*

Arvizu, Dianne, M.Ed. ..... *Instructor, Basic Skills/ABE–GED*

Asfari, Amin, M.S. ..... *Instructor, Criminal Justice Technology*

Atkinson, Kevin D., B.A. ..... *Assistant Professor, Pre-Curriculum*

Austin, Gail R., M.S. ..... *Associate Professor, Early Childhood Education*

Averre, Patricia, M.S., R.N. ..... *Instructor, Nursing*

Aydlett, Thomas, M.S. ..... *Instructor, Mathematics*

Baggett, Vickie W., M.Ed., M.S., R.N., ... *Associate Professor, Psychiatric Mental Health*

Baggott, Kathleen L., B.A. ..... *Instructor/Recruiter/ Retention & Transition Specialist*

Bagliani, William M., M.A. ..... *Instructor, History*

Bahamon, Janneke, M.A. ..... *Instructor, English as a Foreign Language*

Bales, Philip, A.A. ..... *Instructor, Culinary Technology*

Ball, Donald H., Ph.D. ..... *Professor, English*

CREDENTIALS DIRECTORY

Ball, Eric A., M.S. ..... *Instructor, Accounting*

Ballard, Susan E., B.A. ..... *Instructor/English as a Second Language Teaching Certificate Program Specialist*

Barbour, Angela W., A.A.S. ..... *Instructor, Esthetics Technology*

Barile, Virginia S., M.Ed. ..... *Associate Professor, English*

Barrie, Ijatu, M.A. ..... *Instructor, Business Administration*

Bartlett, Eugene R., Ph.D. ..... *Instructor,Biology*

Barton, Denise H., M.B.A. ..... *Professor, Business Administration*

Beaman, Thomas E., M.A. ..... *Instructor, Anthropology*

Beasley, Kenneth D., B.S. ..... *Instructor, Individualized Learning Center, Math Center*

Beech, Jacquelyn, M.S. ..... *Instructor, Psychology*

Bell, Megan Nichols, M.A. ..... *Instructor, Communication*

Benitez, Juan A. ..... *Instructor, Correction Education*

Benton, Deborah S., M.A. ..... *Associate Professor, Mathematics*

Benton, Kathleen M., M.B.A. ..... *Instructor, Pre-Curriculum Mathematics*

Berman, Robert P., M.A. ..... *Assistant Professor, Pre-Curriculum*

Bernhardt, Jack E., M.A. ..... *Associate Professor, Anthropology*

Berry, Alden C., M.B.A. ..... *Assistant Professor, Criminal Justice Technology*

Berry, Heather, M.A.. ..... *Instructor, English as a Foreign Language*

Berry, Rebecca, M.A. ..... *Instructor, History*

Best, Mariah C., M.B.A. ..... *Instructor, Business Administration*

Bishop, Valerie, B.S. ..... *Instructor, Cosmetology*

Blanchard, Brandi, B.S. ..... *Instructor, Office Administration*

Blatchford, Deanna C., M.S. ..... *Instructor, Pre-Curriculum Mathematics*

Bouknight-Lyons, Cyntria, M.I.S. ..... *Instructor, Computer Information Technology*

Bourget, Josee, M.S.M. ..... *Instructor, Computer Information Technology*

Bowen, Jimmy, M.S. ..... *Instructor/Recruiter/Retention Specialist*

Bowden, Nicholas, M.A. ..... *Instructor, English*

Bowers, Joshua M., M.A. ..... *Associate Professor, Mathematics*

Brackett, Holly F., M.G.I.S.T. ..... *Instructor, Surveying Technology*

CREDENTIALS DIRECTORY

Breneman, Reed M., M.A. ..... *Instructor, Pre-Curriculum*

Breivogel, Kimberly B., M.S., M.A. ..... *Associate Professor, Psychology*

Broden, Jane A., B.A. ..... *Associate Professor, Hospitality Management*

Brown, Jean D. ..... *Instructor/Healthcareer Coordinator*

Buck, Jocelyn, M.A. ..... *Instructor, Health & Fitness*

Budd, Benita A., M.A. ..... *Professor, English*

Burk, Cheryl A., M.Ed. ..... *Associate Professor, Pre-Curriculum*

Burkart, Kirsten M., M.A. ..... *Associate Professor, English*

Burns, Charles L., M.S., M.B.A. ..... *Instructor, Chemistry*

Burton, Sloan M., B.A. ..... *Instructor, Architectural Technology*

Cahoon, Elizabeth R., M.S. ..... *Instructor, Health & Fitness*

Campbell, Ethel, CDA, RDH, M.S. ..... *Instructor, Dental Hygiene & Dental Assisting*

Campilongo, Xiomara, M.A. ..... *Instructor, Spanish*

Campos Rosa, Suya, A.A.S. ..... *Instructor, Culinary Arts*

Carapelle, Beverly, M.A. ..... *Associate Professor, History*

Carawon, Robert E., M.A. . ..... *Instructor, Computer Information Technology*

Card, David O., B.S. ..... *Instructor, Architectural Technology*

Carreno-Zingaro, Carrie, Ph.D. ..... *Instructor/Coordinator, Biology, Individualized Learning Center*

Carino, Gloria G., B.A. ..... *Instructor/Coordinator, Math Center*

Cash, Vanessa Johnson., A.A.S., NCEMT-P ..... *Instructor, Emergency Medical Science*

Castellow¸ Elizabeth S., M.A. ..... *Associate Professor, Spanish*

Ceciliano, Lisa U., B.A. ..... *Instructor/Recruiter/Retention & Transition Specialist*

Chao, Frank G., Ph.D. ..... *Associate Professor, Database Administration*

Chapman, James J., J.D. ..... *Assistant Professor, Criminal Justice Technology*

Cheatham, Tracy M., M.S. ..... *Instructor, Chemistry*

Chen, Chen-Pi Peter, M.A. ..... *Associate Professor, Database Administration*

Chen, Cheng, M.Ed. ..... *Instructor, Chinese*

Chilton, Jimmie H., Ph.D. ..... *Instructor, Physics*

Church, Elizabeth M., M.A. ..... *Associate Professor, Spanish*

CREDENTIALS DIRECTORY

Clark, Lesley, A.A.S., R.T. (R) (ARRT) ..... *Instructor, Radiography*

Clark, Timothy, M.S. ..... *Instructor, Geology*

Clarke, Kimberley E., M.S., R.N. ..... *Instructor, Nursing*

Clayton, Jo Anne, M.S. ..... *Associate Professor, Sociology*

Clinton, Wendy, M.S. ..... *Instructor, Mathematics*

Clower, Dan F., B.F.A. ..... *Instructor, Correction Education*

Cohen, Scott R., M.B.A., M.S. ..... *Instructor, Accounting*

Collie, Cathy M., M.Ed. ..... *Instructor, Early Childhood Education*

Compton, Amelia, Ph.D. ..... *Instructor, Psychology*

Converse, Stanley P., M.P. ..... *Instructor, Physics*

Corbett, Donna, B.A. ..... *Instructor*, *Correction Education*

Covington, Kathryn M., B.A. ..... *Instructor/Coordinator, Special Populations & HEP*

Cowper, Edith D., M.A. ..... *Instructor/Recruiter/Retention& Transition Specialist*

Cox, Samantha P., M.B.A., CPA ..... *Associate Professor, Accounting*

Creech, Janet C., B.S. ..... *Assistant Professor, Health & Fitness*

Crews, Brandon, B.F.A. ..... *Instructor, Simulation & Game Development*

Cruz, Omayra., M.A. ..... *Instructor, English*

Cui, Hong, M.S. ..... *Associate Professor, Computer Programming/Database Administration*

Cunningham, Maureen G., M.Ed. ..... *Instructor, Pre-Curriculum*

D'Agata, Nicolas, M.S. ..... *Instructor, Web Technologies*

Daniel, Linda, M.S. ..... *Instructor, Biology*

Darvish, Ali, M.S. ..... *Instructor, Computer Information Technology*

Davis, Elizabeth R., Ph.D. ..... *Instructor, Psychology*

Davis, Joseph, M.S. ..... *Instructor, Geology*

Davy, Sheryl F., M.A. ..... *Instructor, English as a Foreign Language*

Dawes, Karen R., M.A. ..... *Associate Professor, Sociology*

Dawson, Debra A., M.A. ..... *Instructor, Early Childhood Education*

DeAlba, Marlys A., M.L.A. ..... *Assistant Professor, Architectural Technology*

Dees, Lori A., M.A. ..... *Instructor, Pre-Curriculum*

CREDENTIALS DIRECTORY

Degen, Daniel, B.S. ..... *Instructor/Recruiter/Retention Specialist, Education Technology*

DeMarco, Leslie, A.A.S. ..... *Instructor, Baking & Pastry*

Dennis, Phillip S., Ph.D. ..... *Instructor, English*

Deyneka, Alexandra, M.A. ..... *Instructor, Art*

Diamond, Ian R., B.S. ..... *Instructor, College & Career Readiness Transitions*

Dixit, Ajit S., Ph.D. ..... *Instructor, Chemistry*

Dockery, Tyler, M.A. ..... *Instructor, Advertising & Graphic Design*

Dolganiuc, Viorica, M.A. ..... *Instructor, College & Career Readiness/Transitions*

Donaldson, William C., M.S. ..... *Instructor, Electrical Engineering Technology*

Doody, Susan M., M.A. ..... *Assistant Professor, English*

Doody, Thomas, M.A. ..... *Instructor, History*

Duke, Rodney A., A.A.S. ..... *Instructor, Mechanical Drafting Technology*

Eatmon, Justin L., M.F.A. ..... *Instructor, English*

Eaton, Kimberly L., Ph.D. ..... *Instructor, Psychology*

Eddington, Lora M., M.S., M.B.A. ..... *Professor, Engineering*

Edgerton, Calvin Ray, B.S. ..... *Instructor, Construction Management*

Edwards, Gloria W., B.S. ..... *Instructor/Coordinator, Individualized Learning Center*

Edwards, Verna, M.I.S. ..... *Instructor, Computer Information Technology*

Egan, Gerard W., A.A.S., ASE Certified Master Automobile Technician .. *Associate Professor, Automotive Systems Technology*

Eldridge, Julie I., B.A. ..... *Associate Professor, Architectural Technology*

Emadi, Shahrzad D., M.S. ..... *Assistant Professor, Mathematics/ILC*

Engel, Susan K., M.S. ..... *Instructor, Medical Office Administration*

Eskandari, Aisha, A.A.S. ..... *Instructor, Simulation & Game Development*

Espinosa, Steven, B.S. ..... *Instructor, Simulation & Game Development*

Etheridge, John, M.A. ..... *Instructor, English*

Evarts, Jennifer L., M.A. ..... *Instructor, English*

Faircloth, Kimberly, B.S. ..... *Assistant Professor, Office Administration*

Fargo, Patrick, M.S. ..... *Instructor, Computer Information Technology*

Farmer, Deborah L., M.S., R.N. ..... *Instructor, Nursing*

Fenton-Glass, Julie, M.A. ..... *Associate Professor, English*

Fields, Jacqueline G., B.S. ..... *Assistant Professor, Pre-Curriculum Mathematics*

Figueroa, Carlos, B.S. ..... *Instructor, Vocational Education*

Finch, Joanne, M.A. ..... *Instructor, Individualized Learning Center, College & Career Readiness Division*

Fleming, Rhoderick E., B.S. ..... *Instructor, Pre-Curriculum Mathematics*

Floyd, Delores E., A.A.S., R.T. (R)(M)(CT)(QM)(BD) (ARRT) ..... *Professor, Radiography*

Ford, Leighton, M.A. ..... *Instructor, Mathematics*

Foster, Brandon L., M.S. ..... *Associate Professor, Biology*

Foster, Cynthia R., B.S. ..... *Associate Professor, Simulation & Game Development*

Foster, Patricia, M. ..... *Instructor, Psychology*

Fowler, Cindy M., M.Ed. ..... *Instructor, Pre-Curriculum Mathematics*

Fox, Damian, M.F.A. ..... *Instructor, Simulation & Game Development*

Fox, Sarah, M.A. ..... *Instructor, Spanish*

Fraccola, Stephanie A., A.A.S., NCEMT-P ..... *Associate Professor, Emergency Medical Science*

Fraller, Larry, M.A. ..... *Instructor, Basic Skills/AHS Distance Coordinator*

Frear, Lori A., Ph.D. ..... *Associate Professor, Biology*

Furbish, Deborah W., M.S. ..... *Associate Professor, Biology*

Furbish, Dean R., Ph.D. ..... *Associate Professor, Biology*

Fussell, Karen H., M.S. ..... *Instructor, Pre-Curriculum Mathematics*

Gandy, Christopher N., M.A. ..... *Assistant Professor, Philosophy*

Garner, Jessica A., M.Ed. ..... *Instructor, Pre-Curriculum*

Gattis, Julie A., M.F.A. ..... *Instructor, Art*

Gault, Kathryn, B.S., R.T. (R) (ARRT) ..... *Instructor, Radiography*

George, Patricia, M.S. ..... *Associate Professor, English*

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