

2013-2014 College Catalog | Volume 35



# **ATTENTION!**

This document was last updated October 10, 2013

Please view the online catalog for the most current information at <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>



# Welcome to Wake Tech!

We've prepared this catalog for you – to help you select the courses, academic programs, and career pathway you need to create the future you want.

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 be the first steps toward more education, opening doors to additional studies and advanced degrees. 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 stay "ahead of the curve" with innovative approaches, while maintaining 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, and we're glad to be a part of the exciting journey ahead.

Sincerely,

Dr. Stephen C. Scott

President



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Remember to check the online College Catalog for the most up-to-date information at <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>

# **About the Catalog**

#### **ABOUT THE CATALOG**

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

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

#### **DISABILITY SUPPORT**

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

#### **Disability Services/Access for Students**

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

Employment Access Benita Clark, Chief Human Resources Officer 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.

#### **CHANGE IN STUDENT DATA**

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

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

#### **OTHER CHANGES**

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

Last Updated 10/10/13

#### GENERAL INFORMATION

#### **HISTORY**

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

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

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

#### **MISSION**

#### **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.

#### VISION

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

#### **CORE VALUES**

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

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

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

#### Responsibility - Responsibility is the root

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

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

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

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

#### **COLLEGE GOALS**

#### Student Success

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

#### **Workforce Development**

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

#### **Diverse Populations Learning Needs**

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

#### Resources

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

#### **Technology**

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

#### **Community Services**

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

#### PROGRAMS & SERVICES

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

- offers credit programs leading to associate degrees, diplomas, and certificates designed for immediate entry into
  employment, an associate degree in general education, and associate degrees designed to transfer to four-year
  institutions. The College also offers pre-curriculum programs for students to develop academic proficiency so that
  they may successfully complete curriculum courses;
- provides occupational career enhancement programs for individuals and support for economic development to
  businesses, industries, and agencies. Basic skills education, English as a Second Language and a wide variety of
  continuing education courses and programs for personal enrichment are offered on campus and throughout the
  county. The College further serves its constituents by providing a broad range of community services, partnerships,
  and outreach programs;
- provides a wide range of support services designed to assist students in successfully fulfilling their education and
  occupational goals. These services, developed to meet the diverse needs of individual students, begin with their
  initial contact with the College and continue throughout their enrollment and job placement or transfer for further
  study; and
- **practices** sound fiscal management and systematic planning to provide facilities, equipment, and state-of-the art technology to ensure quality education opportunities at secure facilities accessible to Wake County citizens.

#### **ACCREDITATION**

#### Southern Association of Colleges and Schools Accreditation (SACS)

Wake Technical Community College is accredited by the 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.

#### Heavy Equipment and Transport Technology/ Construction Equipment Systems Program Accreditation

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

#### **Medical Assisting Program Accreditation**

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

#### **Medical Lab Technology Program Accreditation**

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

#### **Radiography Program Accreditation**

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

#### **Surgical Technology Program Accreditation**

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

#### **APPROVALS**

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

#### **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 Mathematical Association of Two-Year Colleges (AMATYC)

APPA Membership & Outreach Department

Association of College & University Auditors (ACUA)

Association Community College Business Officials (ACCBO)

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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 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 - Fuguay-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)
Cooperative Education & Internship Association, Inc. (CEIA)
Council for Adult & Experiential Learning (CAEL)
Council for Resource Development (CRD)
Downtown Raleigh Alliance (DRA)
EduCause
Help Desk Institute (HDI)
Home Builders Association of Raleigh-Wake County
International Association of Campus Law Enforcement Administrators (IACLEA)
International Council on Hotel, Restaurant, and Institutional Education (ICHRIE)
Leadership Raleigh Alumni Association
League for Innovation Community College, Leadership Institute, League Alliance Services
Learning Resources Network (LERN)
NASPA (Student Affairs Administrators in Higher Education)
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
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 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 Chamber (formerly NCCBI)
North Carolina College and University Professional Association - Human Resources (NCCUPA-HR)
North Carolina Community College Student Development Personnel Association (N3CSDPA)
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Last Updated 10/10/13

North Carolina Council of Officers for Resource Development (NC CORD)

North Carolina Law Enforcement Accreditation Network (NCLEAN/CALEA)

North Carolina Police Executives Association (NCPEA)

North Carolina Technology Association (NCTA)

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 J Council of Gov't Triangle Clean Cities Coalition

Triangle Society for Human Resource Management (TSHRM)

University and College Designers Association (UCDA)

US Green Building Council (USGBC)

Wake Area Business Advisory Council (BAC)

Wake Association of Volunteer Administrators (WAVA)

World Future Society

#### **FOUNDATION**

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

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

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

Donors or advisors should send correspondence to:

Executive Director Wake Technical Community College Foundation 9101 Fayetteville Road Raleigh, North Carolina 27603-5696 919-866-5924

omcongleton@waketech.edu

Website: http://foundation.waketech.edu/

#### **LOCATIONS**

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

#### Main Campus

9101 Fayetteville Road Raleigh, North Carolina 27603 919-866-5000

http://maincampus.waketech.edu

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

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

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

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



#### **Northern Wake Campus**

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

Wake Tech's Northern Wake Campus opened in August 2007 with two instructional buildings and a regional plant for heating and cooling. Building A is where core subjects, such as English and history, are taught. It's also the home of Student Services, including

admissions, counseling, disability support services, and financial aid. Building B offers a two-story library and state-of-the-art chemistry and biology labs. It also has a bookstore and an Individualized Learning Center (ILC). A third classroom building, Building D, opened in August 2009 with computer labs, physics labs, fine arts classrooms, a distance learning classroom, and a drama room. It also has a coffee shop and wireless Internet access. There are volleyball and tennis courts for physical education.

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

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



#### **Western Wake Campus**

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

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

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

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

- national headquarters for operations outside North Carolina, and civil service employees providing technical support to U.S. military installations in North Carolina.
- Small Business Center Technical and managerial assistance to current and prospective business owners and operators through a variety of seminars, study courses, and one-on-one assistance

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

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



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

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

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

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

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

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



### **Public Safety Education Campus**

321 Chapanoke Road Raleigh, North Carolina 27603 http://publicsafetycampus.waketech.edu

Wake Tech's new Public Safety Education Campus (PSEC) opened as a training center in January 2008, to serve the growing needs of area law enforcement and other public

service agencies. Two years later, it was expanded into a campus with the addition of degree programs, a library, an individualized learning center (ILC), and student services. At more than 65,000 square feet, the PSEC is the first centralized training facility of its kind in Wake County.

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

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



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

The News & Observer Adult Education Center is home to Wake Tech's Basic Skills Division. Basic Skills is designed primarily to help adults learn to read; improve math,

reading, and writing skills; earn a high school diploma or GED certificate; and learn English as a second language.

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

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

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



#### State Personnel Development Center 101 West Peace Street

Raleigh, North Carolina 27603 919-733-2474

Wake Technical Community College and the Office of State Personnel/Human Resource Development formed a partnership over 20 years ago to make computer software and

technology training available to state employees. Wake Tech instructors teach one- and two-day short courses, curriculum classes and on-line courses on the most current software programs with a focus on those used throughout state government.

#### VISITORS AND CHILDREN ON CAMPUS

http://visitors.waketech.edu

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

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

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

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



Remember to check the online College Catalog for the most up-to-date information at <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>

#### **ADMISSION POLICIES**

**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:

The Associate Dean of Admissions will present the applicant's case to an evaluation committee composed of the Chief of Police, SVP for Curriculum Services, General Counsel & VP of Legal Services, a Student Services Counselor, and the Associate VP for Enrollment Management, who will serve as chair/recorder.

The committee will review the case, request an interview with the applicant if necessary, and make a recommendation to the President (through the Senior Vice President of Student Services) within five (5) business days of the review. If the committee recommends admitting the student, no further review will be necessary. If the committee recommends not admitting the student, the President or his designee will make the final admission decision.

The Associate Dean of Admissions will notify the applicant of the decision

#### **Non-Discriminatory Policy**

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

Questions concerning this policy should be addressed to:

#### **Student Matters**

Dean of Student Development/Student Conduct Officer

Main Campus: 919-866-5404

Northern Wake Campus: 919-532-5663

#### **Employee Matters**

Vice President for Northern Wake Campus and Human Resources, 919-532-5522

#### STEPS TO ENROLLMENT

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

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

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

- A curriculum student applicant is any person who is pursuing admittance into a degree, diploma, or certificate
  program. Curriculum applicants must complete the standard Online Application for Admission and submit official
  high school transcripts, if required for placement into a program of study. Current and/or subsequent registrations
  and awarding of financial aid will be blocked if official transcripts are not on file.
- A special/visiting student applicant is any applicant who is planning to enroll in one or more curriculum courses
  but is not pursuing admission into a degree, diploma, or certificate program. Special/visiting student applicants
  must complete the standard Online Application for Admission and meet all course prerequisites. To verify
  completion of prerequisite courses, applicants must complete the Special Student Prerequisite Approval Form
  (<a href="https://secure.waketech.edu/eaglesnest/forms/files/1188\_SSSpecStudPrereqAppr.pdf">https://secure.waketech.edu/eaglesnest/forms/files/1188\_SSSpecStudPrereqAppr.pdf</a>) 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

The Career and College Promise program provides seamless dual enrollment educational opportunities for eligible North Carolina high school students. For information about eligibility for the program contact the Director of Admissions.

#### **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 <a href="http://www.waketech.edu/student-services/registration-student-records/transcripts">http://www.waketech.edu/student-services/registration-student-records/transcripts</a>.

#### PLACEMENT TESTING

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

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

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

Students who are non-native speakers of English will take the COMPASS-EFL test and may be required to enroll in English as a Foreign Language courses. More information regarding English as a Foreign Language can be found in the Student Services section under Academic Support and Opportunities. Applicants who have been notified that they need placement testing may make an appointment online at <a href="http://testingcenter.waketech.edu">http://testingcenter.waketech.edu</a> or call (919) 866-5461 to schedule an appointment.

To prepare for this computerized placement test, applicants should visit <a href="http://testingcenter.waketech.edu/">http://testingcenter.waketech.edu/</a> for additional test preparation and sample test sites.

#### Placement Requirements for Curriculum Programs of Study

#### **Associate Degree and Diploma Programs**

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

#### **Certificate Programs**

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

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

#### **CLASS SCHEDULE PUBLICATIONS**

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

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

#### COURSE REGISTRATION INFORMATION

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

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

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

Access to the registration system may be blocked if a financial or academic hold has been placed on a student's records. Some classes may require special permission to register from the curriculum dean. Visit Wake Tech's Registration and

Student Records Services <a href="http://registration.curred.waketech.edu">http://registration.curred.waketech.edu</a> 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 <u>Student Portal</u>, 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.

#### **CHANGE OF PROGRAM**

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

#### **INTERNATIONAL STUDENTS**

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

Information about the application process for international students can be found at <a href="http://international.waketech.edu/">http://international.waketech.edu/</a>.

#### 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.

#### STUDENT COMPLETION

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

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

#### WE ARE HERE TO HELP!

#### Locations

Main Campus, 9101 Fayetteville Rd. (401 South), Raleigh, NC 27603 Northern Wake Campus, 6600 Louisburg Rd., Raleigh, NC 27616 Health Sciences Campus, 2901 Holston Ln., Raleigh, NC 27610 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 <a href="http://admissions.waketech.edu">http://admissions.waketech.edu</a>

#### 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 <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>

# 2013 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			
4,308	1,658	38.5%			

#### 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
60.1%	82%	49.3%	71.1%

# C. <u>Developmental Students Success Rate in College-Level English Courses</u>

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	# Students	# Success		% Succe	ssful	
Community	# Students	# Success	11-12	10-11	09-10	08-09
College	795	435	54.7%	55%	54%	50%

## D. <u>Developmental Student Success Rate in College-Level Math Courses</u>

Percentage of previous developmental math students who successfully complete a credit math course with a "C" or better upon the first attempt.

System Goal 75.4%

System Baseline 47.5%

Wake Technical	# Students	# Success		% Succe	ssful	
Community	# Students	# Success	11-12	10-11	09-10	08-09
College	1,355	853	63.9%	57%	62%	64%

#### 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%

Tochnical		12 hrs	<ul> <li>Successfully</li> </ul>	% Successful			
Community	Cohort	attempted	completed	11-12	10-11	09-10	08-09
College	3,191	2,565	1,727	67.3%	67%	50%	64%

#### 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%

	#		% Gra	duates	
Wake Technical Community College	Cohort	2006	2005	2004	2003
	1,564	16%	18%	18%	20%

	%	Transfer,	Not Gradu	ıate
Wake Technical Community College	2006	2005	2004	2003
	20%	16%	19%	19%

Wales Taskedasi	% R	etained, Not Gi	raduate or Tran	sfer
Wake Technical Community College	2006	2005	2004	2003
Community Conege —	3%	2%	3%	2%

Mala Tarkainal	%	Graduate, Trar	nsfer, or Retain	ed
Wake Technical Community College	2006	2005	2004	2003
Community College	39.1%	38%	40%	41%

#### 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		
11 - 12	11 - 12	10 - 11	09 - 10	08 - 09
#	%	%	%	%
Tested	Passed	Passed	Passed	Passed
42	86%	95%	91%	88%

Dental Hygiene				
11 - 12				
#	%	%	%	%
Tested	Passed	Passed	Passed	Passed
23	83%	100%	79%	100%

Massage & Body Work					
11 - 12	11 - 12	10 - 11			
# Tested	% Passed	% Passed			
3	NA	100%			

Radiography				
11 - 12				
#	%	%	%	%
Tested	Passed	Passed	Passed	Passed
16	100%	100%	100%	100%

	Registered Nursing				
11 - 12					
#	%	%	%	%	
Tested	Passed	Passed	Passed	Passed	
99	95%	90%	89%	92%	

Cosmetology				
11 - 12	11 - 12	10 - 11	09 - 10	08 - 09
#	%	%	%	%
Tested	Passed	Passed	Passed	Passed
19	100%	NA	NA	NA

Esthetician				
11 - 12	11 - 12	10 - 11	09 - 10	08 – 09
#	%	%	%	%
Tested	Passed	Passed	Passed	Passed
18	24%	100%	90%	NA

		EMT		
11 - 12	11 - 12	10 - 11	09 - 10	08 – 09
#	%	%	%	% Passed
Tested	Passed	Passed	Passed	70 Fasseu
168	90%	94%	92%	96%

		EMT - 1	[	
11 - 12	11 - 12	10 - 11	09 - 10	08 - 09
#	%	%	%	%
Tested	Passed	Passed	Passed	Passed
6	83%	86%	92%	79%

		EMT -	P	
11 - 12	11 - 12	10 - 11	09 - 10	08 - 09
#	%	%	%	%
Tested	Passed	Passed	Passed	Passed
9	100%	100%	100%	NA

#### 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
	530	92%	235	93%

Wake Technical	20:	10 – 2011 To	tals	% ≥	2.00
Community	Students	# ≥ 2.0	% ≥ 2.0	09 - 10	08 – 09
College	765	703	91.9%	92%	91%



Last Updated 10/10/13		2013-5 Fall 2013 16 Weeks 8/16/13 12/18/13 8/12/13 8/12/13 8/15/13	Pall 2013 1st Mini-mester 8/16/13 10/17/13 8/19/13 8/19/13 8/21/13	EULUM Average Fall 2013 2nd Minimester 10/18/13 12/18/13 10/21/13 10/17/13	2013-2014 CURRICULUM ACADEMIC CALENDAR SUMMARY  Fall 2013 Fall 2013 Spring 2014 Spring 2014 s 1 <sup>st</sup> Mini-mester mester mester mester  8/16/13 10/18/13 1/6/14 1/6/14 3/5/14  10/17/13 12/18/13 1/6/14 1/6/14 1/6/14  8/16/13 10/17/13 1/10/14 1/6/14 3/6/14  8/16/13 10/17/13 1/10/14 1/5/14 3/6/14  8/12/1/3 10/17/13 1/15/14 1/5/14 3/10/14	Spring 2014 1st Mini- mester 1/6/14 3/3/14 1/6/14 1/7/14 1/5/14 1/5/14	SUMMARY Spring 2014 2nd Mini-mester 3/5/14 5/7/14 1/6/14 3/6/14 3/6/14 3/10/14	Summer 2014 10 Weeks 5/20/14 7/30/14 5/20/14 5/27/14 5/27/14 5/28/14	\(\text{\tilde{\tilie}\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde	Summer 2014 1st 5-Week Session 5/20/14 6/24/14 5/20/14 5/21/14
	Deadline for withdrawing with W grade (60% point of semester) – 0% Refund Mid-term break	10/29/13	9/19/13	11/21/13 N/A	3/14/14	2/7/14 N/A	4/14/14	7/1/14 N/A		6/10/14 N/A
	Other breaks	9/2/13; 11/11/13; 11/28-11/30/13	9/2/13	11/11/13; 11/28- 11/30/13	1/20/14; 4/18/14	1/20/14	4/18/14	5/26/14; 7/3/14		5/26/14
	Final Exams	12/12-12/18/13	N/A	N/A	5/1-5/7/14	A/A	N/A	N/A	_	N/A
۵	Deadline for Grade Submission by faculty on WebAdvisor	12/20/13 at 9:00 a.m.	10/24/13 at 9:00 a.m.	12/20/13 at 9:00 a.m.	5/8/14 at 5:00 p.m.	3/10/14 at 9:00 a.m.	5/8/14 at 5:00 p.m.	7/31/14 at 5:00 p.m.	7/1/7 a.m.	7/1/14 at 9:00 a.m.
	Commencement Exercises	12/14/13 Ceremony Times TBA	12/14/13 Ceremony Times TBA	12/14/13 Ceremony Times TBA	5/3/14 Ceremony Times TBA	5/3/14 Ceremony Times TBA	14 emony Times	5/3/14 Ceremony Times TRA	= \(\tilde{\chi}\)	5/3/14 Ceremony Times TRA

# General Information from the Registrar's Office

- This Curriculum Academic Calendar Summary is furnished for planning purposes and is subject to revision to meet changing conditions. Changes in the curriculum academic dates for 2013-14 will be posted online at http://www.waketech.edu/calendar/ (click on the "Archives in PDF Format" link) and at http://www.waketech.edu/student-services/registration-student-records. Updates and corrections will also be disseminated via WTCC Outlook e-mail. ÷
- Semester Class Days: Fall and Spring semesters consist of 80 class days. Summer semesters consist of 50 class days. When using the online calendar (http://www.waketech.edu/calendar/) the numbers in the lower right-hand corner of the calendar blocks indicate the class day for the semester κi
- Key Terms & Definitions: ω.
- Adding a Course: A student may change his/her registration by adding a course through the last day to add, as published in the academic calendar (i.e. Schedule Adjustment ä
- Auditing a Course: Registration (including tuition charges) for courses to be audited is the same as for courses to be taken for credit.

  Dropping a Course: A student may change his registration by dropping a course prior to or on the 10-percent (subject to change) date of the semester/tem.
- Withdrawal Policy: 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. Students who withdraw or who are withdrawn after the 60% point will be awarded a grade of WP or WF. ن ن خ
- 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. 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

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#### OFFICIAL COMMUNICATION WITH STUDENTS POLICY

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

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

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

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

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

#### TRANSCRIPT REQUESTS

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

Official copies of transcripts may be obtained in person, with a photo I.D., at the Registration and Student Records Services Division in room 243A of the Student Services Building. Transcripts may also be requested by mail or fax or made online by downloading an order form at <a href="http://www.waketech.edu/student-services/registration-student-records/transcripts">http://www.waketech.edu/student-services/registration-student-records/transcripts</a>. 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 the total hours earned.

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

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

Most challenge exams are administered within the appropriate department, however, a select number of courses including BUS 110, 121, 137, 147, 153; ENG 101; MAT 070, 080; PSY 101, 110, and 118 may be taken in the Individualized Learning

Center (ILC) on main campus. Students challenging these select courses must obtain approval from the Division Dean and contact the ILC (919-866-5276) to schedule an appointment to take the exam. Both the Division Dean approved form # 610 and student photo identification is required for ILC administered challenge exams.

#### 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 <a href="http://clep.collegeboard.org/?affiliateld=rdr&bannerld=clep">http://clep.collegeboard.org/?affiliateld=rdr&bannerld=clep</a> 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	O. Gait		
Financial Accounting	50	ACC 120	4
Business Law, Introductory	50	BUS 115	3
Information Systems and Computer	50	CIS 110, 111	3
Applications		0.0 110, 111	
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	50	HIS 131	3
to 1877			
History of the United States II: 1865 to	50	HIS 132	3
Present			
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 (MA	AT ###) and r	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	8
		182	
	4	SPA 111, 181, 112, 182,	12
		211, and 281	
	5	SPA 111, 181, 112, 182,	16
		211, 281, 212 and 282	
Spanish Language Literature	4	SPA 111 and 181	4
	5	SPA 111, 181, 112, and	8
		182	
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	3
		MAT 271	
Mathematics, Calculus BC	3, 4, or 5	MAT 223* or MAT 263* or	3
		MAT 271 and MAT 272	
Physics, Physics B	3	PHY 131 and PHY 133	8
		or PHY 151 and PHY 152	8
		or PHY 251	4
Physics, Physics C: Mechanics	3	PHY 131 or PHY 151 or	4
		PHY 251	
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	Wake Tech Course Equivalency	Semester Hours
	Equivalency		
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			

#### **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 <a href="http://www.collegeboard.org/">http://www.collegeboard.org/</a>.

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 &	OST 131	2
Technology	CIS 110	3
Part II Office Systems and	BUS 260	3
Administration	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

#### **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

#### **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

#### **AARTS (Army/ACE Registry Transcript System)**

Prospective students who have military experience may be able to obtain some equivalencies toward an AAS degree, diploma, or certificate. This equivalency is the result of 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 awarded as appropriate.

Effective January 1, 2013, AARTS will be transitioning to the Joint Services Transcript (JST) which is a new electronic transcript service. The JST will produce a uniform transcript of all military training and experiences to service members of all branches, and will include Army Officer and Warrant Officer training, joint military training conducted by other services, and DANTES funded test scores. The merger of AARTS to the JST is expected to be completed by December 31, 2012. Personnel data should be reviewed for accuracy and ensure that completed training is documented 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

#### **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

#### **Computer Concepts**

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	Semester Hours
	Equivalency	
IC3 Exams by Certiport:		
IC3 – Living Online Key Applications Computing Fundamentals (All 3 must be successfully completed)	CIS 111	2
Minnesoft		
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)	NET 126	3
Networking for Home & Small Business		
Working at a Small-to-Medium Business or ISP		
CCNA Discovery 2: (all four courses must be		
completed)		
Networking from Home & Small Businesses	NET 125	3
Working at a Small-to-Medium Business or ISP	NET 126	3
Introducing Routing & Switching in the Enterprises	NET 225	3
Designing & Supporting Computer Networks	NET 226	3
CCNA Discovery 3 (all 5 courses must be		
completed)		
Networking to Home & Small Business	NET 125	3
Working at a Small-to-Medium Business or ISP	NET 126	3
-		
CCNA Exploration 5		
Routing Protocols & Concepts	NET 225	2
LAN Switching & Wireless		3
Accessing the WAN		
CCNP: Implementing Cisco IP Routing	NET 270	3
CCNP: Implement Cisco IP Switched Networks	NET 272	3
CCNP: Troubleshooting & Maintain Cisco IP	NET 273	3
Networks		
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
A+ Essentials & A+ Practical Applications  Network +	220 or CTS 120 and NOS	3

#### **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.

#### **FEES & PAYMENT**

Effective July 1, 2013

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 <a href="https://webadvisor.waketech.edu">https://webadvisor.waketech.edu</a>. 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 \$ 1144.00 /term Less than 16 credit hrs. \$ 71.50 /credit hr.

#### **Out-of-State Students**

16 credit hours or more \$4,216.00 /term Less than 16 credit hrs. \$263.50 /credit hr.

#### **Fees**

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

#### **Application Fee**

Wake Technical Community College does not charge any type of application fee with the exception of International Students\*.

\*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:

### REGISTRATION AND RECORDS

- 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: <a href="http://bookstore.waketech.edu">http://bookstore.waketech.edu</a>.

#### **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 <a href="http://calendars.waketech.edu">http://calendars.waketech.edu</a>. 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.

### REGISTRATION AND RECORDS

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.

#### **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.

#### 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

#### WE ARE HERE TO HELP!

#### Locations

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

#### **Curriculum Admissions**

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

#### Registration and Student Records Services

Location: Main Campus, Student Services Building, Room 243

Phone: (919) 866-5700

Advising

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

#### 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 <a href="https://financialaid.waketech.edu">https://financialaid.waketech.edu</a>.

#### FINANCIAL AID APPLICATION

To apply for financial aid you must complete the Free Application for Federal Student Aid (FAFSA) online at <a href="www.fafsa.gov">www.fafsa.gov</a>. 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.

#### **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 2012-2013, annual awards range from \$555-\$5550. The maximum PELL-eligible Estimated Family Contribution (EFC) is 4995, with a minimum award for a full-time student of \$602. Award ranges are subject to change based on if Congressional action.

#### Lifetime Eligibility for Federal Pell Grants

Effective July 1, 2012, Pell grants are limited to a lifetime maximum of the equivalent of twelve full time semesters or six years (or 600%) for community colleges, vocational schools, four-year public and private 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 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 will be reduced for students enrolled less than half-time.

#### **Federal Work Study Program**

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

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

#### 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.

#### 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 <a href="http://www.cfnc.org/FELS">http://www.cfnc.org/FELS</a> 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 <a href="http://www.cfnc.org/paying/loan/career/career">http://www.cfnc.org/paying/loan/career/career</a> hsm.jsp for specific program eligibility criteria and application details.

#### Emergency Loan Program

#### Wake Technical Community College Loan Program Application (Emergency Loan)

The Wake Tech Loan Program provides limited, interest-free, short-term funds to students who meet the eligibility requirements below. The maximum loan amount is \$500 per academic year. The academic year includes fall, spring, and summer. Students are limited to one loan per academic year.

#### Loan applications must be received by 5 p.m. on Tuesday.

The Accounting Office no longer dispenses emergency loan checks; all funds are disbursed on Thursday via HigherOne. Funds are disbursed according to the refund preference selected upon enrollment. Please visit <a href="www.mywaketechcard.com">www.mywaketechcard.com</a> for additional information regarding the HigherOne refund process.

To be eligible, a student must:

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

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

#### **SCHOLARSHIPS**

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

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

#### FINANCIAL AID REFUNDS AND REPAYMENTS

After your financial aid has paid your tuition, fees, and book charges, any balance that remains in your account will be refunded to you. 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 <a href="https://www.mywaketechcard.com">www.mywaketechcard.com</a> 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 <a href="http://financialaid.waketech.edu">http://financialaid.waketech.edu</a> 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.

#### **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 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.

# 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 quidelines.

#### **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 ( $64 \times 150\% = 96$ ). 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 <a href="Satisfactory Academic Appeal">Satisfactory Academic Appeal</a> 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.

#### **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 <a href="https://www.gibill.va.gov">www.gibill.va.gov</a>. 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 <a href="https://www.gibill.va.gov">www.gibill.va.gov</a>.

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 <a href="http://veterans.waketech.edu">http://veterans.waketech.edu</a>.

#### 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

#### TRANSFER STUDENTS SEEKING FINANCIAL AID

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

#### WE ARE HERE TO HELP!

#### Locations

#### **Main Campus**

9101 Fayetteville Rd. (401 South), Raleigh Student Services Bldg 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)

#### **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 <a href="http://waketech.financialaidtv.com/">http://waketech.financialaidtv.com/</a>, which contains several videos that explain various financial aid topics and concerns or visit the Financial Aid's main website, <a href="http://financialaid.waketech.edu">http://financialaid.waketech.edu</a>

#### **Financial Aid Application**

www.fafsa.ed.gov



Remember to check the online College Catalog for the most up-to-date information at <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>

#### **ACADEMIC RECOGNITION**

#### President's List

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

#### Dean's List

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

#### President's Award for Excellence

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

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

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

#### Who's Who Among Students In American Junior Colleges

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

#### ATTENDANCE POLICY

#### 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.

#### **Accommodating Absences Due To Religious Observances**

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

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

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

Examples of suitable accommodations include but are not limited to:

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

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

#### **ADD, AUDIT & WITHDRAWAL POLICIES**

#### **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:

- 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.

#### **GRADES**

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

#### **GRADE POINTS**

<u>Grade</u>	Per Credit	<b>Explanation</b>
Α	4	Excellent
В	3	Very Good
С	2	Satisfactory
D	1	Poor

<u>Grade</u>	Per Credit	<u>Explanation</u>
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.

<u>Grade</u>	<u>Explanation</u>
Α	Excellent
В	Very Good
С	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.

<u>Grade</u>	<u>Explanation</u>
Р	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.

<u>Grade</u>	<b>Explanation</b>
ΑU	Audit
FG	Forgiven
ı	Incomplete
ΙP	In Progress (Pre-Curriculum and Multi-
IP	entry/multi-exit classes only)
NA	Never Attended
Р	Pass (Developmental Mat and Cooperative
Р	Education Use Only)
R	Repeat (Developmental Math Use Only)
W	Withdrew
WP	Withdrew Passing (after 60%)
T	Transfer Credit
Χ	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):

- 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	Α	4	12
Physics	3	D	1	3
Economics	3	В	3	9
Chemistry	5	F	0	0
Psychology	3	С	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 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.

# 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 ten days of the semester to learn about available academic and counseling services.

#### **Probation**

If the cumulative GPA of a student who is already on academic warning remains below 2.0 at the end of the 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 Success Contract. Depending on the student's major, the advisor should release the restriction to restore the student's access to the registration system once the Academic Success Contract has been created and signed by the student.

#### Suspension

If the cumulative GPA of a student who is already on academic probation remains below 2.0 at the end of the 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 Appeal of Academic Suspension form to the Registrar. The appeal will be considered by the Academic Standing Review Committee if the student's transcript shows that while the cumulative GPA of 2.0 has not been achieved, significant progress has been made. Significant progress would mean a minimum 2.0 GPA for the most current term and/or a grade of C or better in all pre-curriculum courses for the current term. Appeal decisions will be sent to the student's Wake Tech e-mail address.

If the appeal is approved, the student must meet with a counselor or advisor to develop an Academic 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 on the Academic Success Contract, at any point during the semester, will have his registration deleted. Students who have been granted an appeal are not eligible to participate in intercollegiate athletics, as the primary goal is to improve academic performance.

If the appeal is denied, the student must sit out for one semester.

#### Reinstatement Process for Students Not Appealing Academic Suspension

Students who choose not to appeal their academic standing may request reinstatement for a future term (after sitting out one term of suspension) by submitting a Reinstatement Request to the Counseling Services Department.

In order for reinstatement to be considered, students must attend a required Student Success Workshop sponsored by the Counseling Services department. Requests for reinstatement must be received one month prior to the start date of the term for which the student wants to re-enroll.

#### Satisfactory Progress in Health Sciences Curricula

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

#### **Satisfactory Progress in Pre-Curriculum Courses**

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

#### **Graduation Requirements**

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

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

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

#### **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.

#### **POLICY CHANGES**

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

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

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

#### PRE-CURRICULUM

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

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

#### **Pre-Curriculum Courses:**

ENG 070, ENG 080, ENG 090, RED 070, RED 080, RED 090, MAT 050, MAT 060, MAT 070, MAT 080, and ACA 090

#### **PREREQUISITES**

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

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

#### SECURITY OF STUDENT RECORDS

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

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 is published in the college catalog. Procedures implementing the provisions of FERPA are published in the college catalog. Questions concerning FERPA and Wake Tech's policy 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) college officials who have access, consistent with FERPA, to such information and only in conjunction with a legitimate educational interest; and (c) 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!

#### 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

#### 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 provide the resources to assist, enhance, support and sustain student enrollment, learning, and development in order for all students to experience success and complete their educational goals.

#### **ACADEMIC SUPPORT & OPPORTUNITIES**

#### **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.

#### **Bookstore**

Website: http://bookstore.waketech.edu

Students are encouraged to take advantage of online ordering and home delivery.

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

#### **Locations and Hours**

#### **Main Campus**

8 a.m.-7 p.m., Monday-Thursday 8 a.m.-3 p.m., Friday

Special hours of operation are posted on the bookstore door as needed.

#### **Northern Wake Campus**

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

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

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

- 1. Required textbooks for a particular term are available through the drop/add period. Immediately following the tenth academic day of a semester, most of the unsold books are returned to the publishers.
- 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 <a href="http://bookstore.waketech.edu">http://bookstore.waketech.edu</a>.

#### 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

#### **For More Information**

919-866-5460

#### Individualized Learning Center (ILC)

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

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

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

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

Admission test preparation (COMPASS, TEAS, and others) is available through independent study or by qualifying for services in the Basic Skills Center. Challenge exams for certain Wake Tech courses are available with proper identification

and approval paperwork from the academic department. An independent study, self-paced tutorial program for proficiency in high school level Chemistry can be completed through independent study in the ILC.

#### ILC CAMPUS LOCATIONS

Main ILC, Room 112 9101 Fayetteville Rd. Raleigh, NC 27603 919-866-5276	Northern Wake Math and Science Bldg., Room 213 6600 Louisburg Rd. Raleigh, NC 27616 919-532-5548	Western Wake Learning Resource Center ILC, 200E 3434 Kildaire Farm Rd. Cary, NC 27518 919-335-1028	Public Safety Education Room 1611 321 Chapanoke Rd. Raleigh, NC 27603 919-866-6100	Health Sciences ILC, HEB 208 2901 Holston Lane Raleigh, NC 27610 919-747-0233
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Hours may vary within each skills center. Please call ahead to check availability or check the ILC website, <a href="http://ilc.waketech.edu">http://ilc.waketech.edu</a>.

#### English As A Foreign Language (EFL)

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

The English as a Foreign Language (EFL) department offers academic English courses for individuals whose native language is not English and who wish to study at the college and university level in the United States. These courses comprise an intensive English language program that focuses on language for academic purposes; courses are offered on four proficiency levels in grammar, composition, reading, and listening/speaking. See the course descriptions listed as EFL in the course descriptions sections of this catalog for specific course information. This program meets the requirements for those students who have a student visa. Prospective students who wish to obtain a student visa should go to the International Student website at http://efl.waketech.edu. Tuition rates are the same as those for other curriculum classes offered at Wake Tech.

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

# College ID Students

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

The card is required for using campus services and attending campus functions and also serves as a library card. Campus security or any college official may ask a student for the college ID card at any time while on campus or at any off-campus activity sponsored by the college. Students without a valid college ID card will be asked to leave 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.

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.-4 p.m., Friday

#### **Health Sciences Campus**

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

#### **Western Wake Campus**

8 a.m.-1 p.m., Monday-Friday

#### **Public Safety Education Campus**

8 a.m.-4:30 p.m., Monday-Friday

#### **Employees and Volunteers**

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

#### **Career and Employment Resources**

Website: http://careers.waketech.edu

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

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

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

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

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

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

#### **Benefits to Student**

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

#### **Benefits to Employer**

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

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

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

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

#### Libraries

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

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

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

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.

#### **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://studentactivities.waketech.edu/clubs/sga to learn more about Wake Tech's SGA.

#### Student Handbook

All regulations and policies pertaining to student conduct are listed in the student handbook. The handbook may be viewed online at <a href="http://handbook.waketech.edu">http://handbook.waketech.edu</a>. 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.

#### **Student Publications**

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

#### **Publications Policy**

Publications are defined to include but are not limited to the following: newspapers, pamphlets, newsletters, brochures, flyers, books, posters, or magazines. Publications may not be printed or distributed without official approval of the Dean of Students. Approved campus organizations may post and distribute their publications if said publications have been approved by the president of the organization, the organization's advisor, and the Dean of 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 to race, sex, or creed, grammatically incorrect statements, and misspelled words will not be approved for printing or distribution. All publications must represent the dignity, mission, and standards of the College. Organizational publications must also be consistent with the philosophy and mission of the organization.

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

From time to time, changes made to published, College policies will affect students. The College reserves the right to make such changes and holds students responsible for keeping themselves informed about these changes. Announcements of changes will be emailed to student's "my.waketech.edu" email address and can be found online at <a href="http://updates.waketech.edu/">http://updates.waketech.edu/</a> 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 their publications in the designated areas of the main campus and the north campus in accordance with the <u>College's Solicitation policy</u>. See General Information, Solicitation.

#### Wake Tech Alumni Association

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

#### **ATHLETICS**

The mission of Wake Tech's <u>athletics</u> 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 <a href="Eagle Club"><u>Eagle Club</u></a> member! Learn more at athletics.waketech.edu.

#### STUDENT CHAPTERS OF PROFESSIONAL ORGANIZATIONS & CLUBS

The Office of Student Development supports and encourages professional organizations and clubs at Wake Technical Community College. Professional organizations and clubs give students a unique opportunity to develop leadership skills, network with professionals in a given field of study, and get involved. Students interested in joining a club should visit the Office of Student Activities in the Student Services Building on the 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 Students.

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

#### **DISABILITY SERVICES**

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

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

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

To obtain additional information or to read documentation guidelines and/or DSS Policies and Procedures, please go to the DSS website <a href="http://disabilityservices.waketech.edu">http://disabilityservices.waketech.edu</a> or contact the DSS office at 919-866-5670 or by Sorensen Video Phone (919) 324-1508.

#### ONLINE / eLEARNING SUPPORT

Wake Technical Community College offers students two options for online/eLearning Support instruction: Internet courses, and hybrid courses. These alternatives to traditional seated classes allow students to take courses at times convenient to their schedules. Each course is facilitated by a qualified, competent instructor who develops the course so that the learning outcomes are comparable to a traditional seated class, who serves as a resource to the students, and who provides a syllabus and course guidelines. Costs and credits earned are the same as on-campus courses, and students have access to equivalent services and resources. Students interested in taking a distance education course should visit Wake Tech Online at <a href="http://online.waketech.edu/">http://online.waketech.edu/</a>.

#### **Internet Courses**

Students registered for Internet courses may be offered the opportunity to attend an orientation or other meeting at the College, but generally the subject matter is presented online and distributed through the College's Blackboard server, <a href="http://dist-ed.waketech.edu">http://dist-ed.waketech.edu</a>. 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, <a href="http://online.waketech.edu/students/previews.html">http://online.waketech.edu/students/previews.html</a>
- 2. Participate in the online student orientation, http://online.waketech.edu/students/online.html
- 3. Review the information posted on the online/eLearning Support website, http://online.waketech.edu/
- 4. Take the self-assessment entitled "Are You Prepared for an Online Course?"

#### **Hybrid Courses**

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

Before enrolling in a hybrid course, students should:

- 1. Preview the hybrid course at http://online.waketech.edu/students/previews.html; and
- 2. Review the information posted on the online/eLearning Support website at http://online.waketech.edu/.

#### **Testing Center**

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

#### **Library Resources**

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

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

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

#### 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.

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

The Office of Volunteerism and Leadership was established to assist students in becoming active local and global leaders. O.V.A.L. promotes Wake Tech's core values of accountability, responsibility and collaboration by providing opportunities for service and leadership training.

O.V.A.L. partners with various community agencies to provide service opportunities for the campus community and to engage students in service projects: 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

O.V.A.L. offers leadership training for students in addition to service opportunities. Two training programs that help students develop leadership abilities are offered on campus: *The Student Leadership Challenge* and *Tuesday and Thursday* @ 2pm. Each year, O.V.A.L. also selects students to participate in leadership training programs off campus, including Leadership Triangle-College Edition, sponsored by AT&T; the Student Leadership Development Program, sponsored by NC Community College Presidents and the NC Community College System Office; and ADVANCE, sponsored by Campus Compact.

O.V.A.L is located on Main Campus, in Room 137 of the Student Services Building. For more details about our programs, please visit our website at <a href="http://www.waketech.edu/student-life/office-volunteerism-and-leadership">http://www.waketech.edu/student-life/office-volunteerism-and-leadership</a>.

#### GENERAL INFORMATION FOR ALL CAMPUSES

#### Campus Security & Safety

Website: http://securityservices.waketech.edu

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

The College's 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				
Name of Alamana and Alamana and Alamana	2009	0	0	0
Murder/Non-negligent Manslaughter	2010	0	0	0
	2011	0	0	0
No aliment Manuel available	2009	0	0	0
Negligent Manslaughter	2010	0	0	0
	2011	0	0	0
Sex Offense				
Family Con Office	2009	0	0	0
Forcible Sex Offense	2010	0	0	0

Non-forcible Sex Offense					
Non-forcible Sex Offense		2011	0	0	0
2010	New femality Co. Officers	2009	0	0	0
Robbery   2009	Non-forcible Sex Offense	2010	0	0	0
2009   0		2011	0	0	0
2010	Robbery				
Aggravated Assault		2009	0	0	0
Aggravated Assault		2010	1	0	0
2009   0		2011	0	0	0
2010   0   0   0   0   0   0   0   0   0	Aggravated Assault				
2011   0   0   0   0		2009	0	0	0
2009   0   0   0   0   0   0   0   0   0		2010	0	0	0
2009   0   0   0   0   0   0   0   0   0		2011	0	0	0
2010   0   0   0   0   0   0   0   0   0	Burglary				
2011   0   0   0		2009	0	0	0
2009   0   0   0   0   0   0   0   0   0		2010	0	0	0
2009 0 0 0 0 0 0 2010 0 0 0 2011 0 0 0 0 0 0		2011	0	0	0
2010     0     0     0       2011     0     0     0   Arson  2009 0 0 0 0 0 0 0	Motor Vehicle Theft				
2011     0     0     0       Arson     2009     0     0     0       2010     0     0     0       2010     0     0     0		2009	0	0	0
Arson 2009 0 0 0 0 2010 0 0		2010	0	0	0
2009 0 0 0 2010 0 0 0		2011	0	0	0
2010 0 0	Arson				
2010		2009	0	0	0
2011 0 0 0		2010	0	0	0
		2011	0	0	0

<sup>\*</sup> 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				
Manual an/Ni an an anti-manut Manual an anti-manut an	2009	0	0	0
Murder/Non-negligent Manslaughter	2010	0	0	0
	2011	0	0	0
Nagisant Manalaushtas	2009	0	0	0
Negligent Manslaughter	2010	0	0	0
	2011	0	0	0
Sex Offense				
Familia Carroff	2009	0	0	0
Forcible Sex Offense	2010	0	0	0
	2011	0	0	0

Main Campus Hate Crime Statistics (continued)				
	2009	0	0	0
Non-forcible Sex Offense	2010	0	0	0
	2011	0	0	0
Robbery				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Aggravated Assault				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Burglary				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Motor Vehicle Theft				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Arson				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Larceny-Theft				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Simple Assault				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Intimidation				
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Destruction/Damage/Vandalisn	n of Property			
	2009	0	0	0
	2010	0	0	0
	2011	0	0	0

<sup>\*</sup> 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				
	2009	0	0	0
Liquor Law Violations	2010	0	0	0
	2011	0	0	0
D. Alexandra Victoria	2009	3	0	0
Drug Abuse Violations	2010	0	0	0
	2011	0	0	0
Illegal Weapons Possession	2009	0	0	0
	2010	0	0	0
	2011	4	0	0
Judicial Referrals				
Liquor Law Violations	2009	0	0	0
	2010	0	0	0
	2011	0	0	0
Drug Abuse Violations	2009	3	0	0
	2010	0	0	0
	2011	0	0	0
	2009	0	0	0
Illegal Weapons Possession	2010	0	0	0
*1-1-1-0-6	2011	1	0	0

<sup>\*</sup> 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.

### **Health Science Campus Crime Statistics**

Type of Offense		On Campus	Public Property
Criminal Homicide			
Manday/Navaradisayt Mandayahtay	2009	0	0
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
No eliment Manuel eveleter	2009	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
Sex Offense			
5 11 0 0"	2009	0	0
Forcible Sex Offense	2010	0	0
	2011	0	0
New femilies Con Office	2009	0	0
Non-forcible Sex Offense	2010	0	0

2011 0 0

### **Health Science Campus Crime Statistics (Continued)**

Robbery			
	2009	0	0
	2010	0	0
	2011	0	0
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0
	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Arson			
	2009	0	0
	2010	0	0
	2011	0	0

### **Health Sciences Campus Hate Crime Statistics**

Type of Offense		On Campus	Public Property
Criminal Homicide			
Muselan/Nara manifesant Manalausiktan	2009	0	0
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
No. Proced Manual Control	2009	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
Sex Offense			
F - 21 - 0 - 0 %	2009	0	0
Forcible Sex Offense	2010	0	0
	2011	0	0
N ( "I   0   0"	2009	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
Robbery			
	2009	0	0
	2010	0	0
	2011	0	0

**Health Sciences Campus Hate Crime Statistics (Continued)** 

nealth ociences oampus n		Ctatiotics (C	
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0
	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Arson			
	2009	0	0
	2010	0	0
	2011	0	0
Larceny-Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Simple Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Intimidation			
	2009	0	0
	2010	0	0
	2011	0	0
Destruction/Damage/Vandalism of Property			
	2009	0	0
	2010	0	0
	2011	0	0

### **Health Sciences Campus Arrests and Judicial Referrals**

Other Offenses		On Campus	Public Property
Arrests			
Line and a Ministra	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
Drug Abuse Violetiens	2009	0	0
Drug Abuse Violations	2010	0	0

	2011	0	0
Illegal Weapons Possession	2009	0	0
	2010	0	0
	2011	0	0

## **Health Sciences Campus Arrests and Judicial Referrals**

Judicial Referrals			
	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
B 41 15 15	2009	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
Illegal Weapons Possession	2009	0	0
	2010	0	0
	2011	0	0

## **Northern Wake Campus Crime Statistics**

Type of Offense		On Campus	Public Property
Criminal Homicide			
Marindan/Marina and Sanara Marindan	2009	0	0
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
No eliment Manalaurahtan	2009	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
Sex Offense			
5 11 0 0°	2009	0	0
Forcible Sex Offense	2010	0	0
	2011	0	0
New for the October Office of	2009	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
Robbery			
	2009	1	0
	2010	0	0
	2011	0	0
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0

	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	1	0
Arson			
	2009	0	0
	2010	0	0
	2011	0	0

## **Northern Wake Campus Hate Crime Statistics**

Type of Offense		On Campus	Public Property
Criminal Homicide			
Maria (National Providence Inc.)	2009	0	0
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
Negligent Manaloughter	2009	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
Sex Offense			
Farsible Say Offeres	2009	0	0
Forcible Sex Offense	2010	0	0
	2011	0	0
New families One Officer	2009	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
Robbery			
	2009	0	0
	2010	0	0
	2011	0	0
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0
	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Arson			

2009	0	0
2010	0	0
2011	0	0

## **Northern Wake Campus Hate Crime Statistics (continued)**

Type of Offense		On Campus	Public Property
Larceny-Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Simple Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Intimidation			
	2009	0	0
	2010	0	0
	2011	0	0
Destruction/Damage/Vandalism of Property			
	2009	0	0
	2010	0	0
	2011	0	0

## **Northern Wake Campus Arrests and Judicial Referrals**

Other Offenses		On Campus	Public Property
Arrests			
Linuxa Lau Vialatiana	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
Davis Alexan Violetians	2009	1	0
Drug Abuse Violations	2010	0	0
	2011	2	0
Wasal Wasasa Danasia	2009	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
Judicial Referrals			
Land A. M. Lafferer	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
De a Alexa Matagara	2009	0	0
Drug Abuse Violations	2010	0	0
	2011	2	0
III I.W	2009	0	0
Illegal Weapons Possession	2010	0	0

2011 0 0

**Western Wake Campus Crime Statistics** 

Type of Offense		On Campus	Public Property
Criminal Homicide			
NA	2009	0	0
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
No elizant Manalaushtan	2009	0	0
Negligent Manslaughter	2010	0	0
	2011	0	0
Sex Offense			
F11-0 - 0"	2009	0	0
Forcible Sex Offense	2010	0	0
	2011	0	0
Non familia Cay Offense	2009	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
Robbery			
	2009	0	0
	2010	0	0
	2011	0	0
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0
	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Arson			
	2009	0	0
	2010	0	0
	2011	0	0

## **Western Wake Campus Hate Crime Statistics**

Type of Offense On Campus Public Property

Cuiminal Hamiaida			
Criminal Homicide			
Murder/Non-negligent Manslaughter	2009	0	0
Warden Hegingen Warleidughter	2010	0	0
	2011	0	0
Negligent Manslaughter	2009	0	0
Negligent Mansiaughtei	2010	0	0
	2011	0	0
Sex Offense			
5	2009	0	0
Forcible Sex Offense	2010	0	0
	2011	0	0
N. 6. 11. 0. 0%	2009	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
Robbery			
	2009	0	0
	2010	0	0
	2011	0	0
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0
	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Arson			
	2009	0	0
	2010	0	0
	2011	0	0

## **Western Wake Campus Hate Crime Statistics (continued)**

Type of Offense		On Campus	Public Property
Larceny-Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Simple Assault			
	2009	0	0

	2010	0	0
	2011	0	0
Intimidation			
	2009	0	0
	2010	0	0
	2011	0	0
Destruction/Damage/Vandalism of Property			
	2009	0	0
	2010	0	0
	2011	0	0

### **Western Wake Campus Arrests and Judicial Referrals**

Other Offenses		On Campus	Public Property
Arrests			
Linuary Calatiana	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
Drug Abus Walsting	2009	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
War al War and Brown in	2009	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0
Judicial Referrals			
Lieuwa I aw Mialatiana	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
December of Marketine	2009	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
W I W	2009	0	0
Illegal Weapons Possession	2010	0	0
	2011	0	0

## **Public Safety Education Campus Crime Statistics**

Type of Offense		On Campus	Public Property
Criminal Homicide			
Murder/Non-negligent Manslaughter	2009	0	0
	2010	0	0
	2011	0	0
Negligent Manslaughter	2009	0	0
	2010	0	0
	2011	0	0
Sex Offense			

Forcible Sex Offense	2009	0	0
	2010	0	0
	2011	0	0
	2009	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0
Robbery			
	2009	0	0
	2010	0	0
	2011	0	0
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0
	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Arson			
	2009	0	0
	2010	0	0
	2011	0	0

N/A – Statistics for 2008 reported in Main Campus Stats prior to designation of Public Safety Training Center as a campus in 2009.

### **Public Safety Education Campus Hate Crime Statistics**

Type of Offense		On Campus	Public Property
Criminal Homicide			
	2009	0	0
Murder/Non-negligent Manslaughter	2010	0	0
	2011	0	0
Negligent Manslaughter	2009	0	0
	2010	0	0
	2011	0	0
Sex Offense			
Forcible Sex Offense	2009	0	0
	2010	0	0
	2011	0	0
No facility of the control of the co	2009	0	0
Non-forcible Sex Offense	2010	0	0
	2011	0	0

Robbery			
	2009	0	0
	2010	0	0
	2011	0	0
Aggravated Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Burglary			
	2009	0	0
	2010	0	0
	2011	0	0
Motor Vehicle Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Arson			
	2009	0	0
	2010	0	0
	2011	0	0

N/A – Statistics reported in Main Campus Stats prior to designation of Public Safety Training Center as a campus in 2009.

### **Public Safety Education Campus Hate Crime Statistics (continued)**

Type of Offense		On Campus	Public Property
Larceny-Theft			
	2009	0	0
	2010	0	0
	2011	0	0
Simple Assault			
	2009	0	0
	2010	0	0
	2011	0	0
Intimidation			
	2009	0	0
	2010	0	0
	2011	0	0
Destruction/Damage/Vandalism of Property			
	2009	0	0
	2010	0	0
	2011	0	0

N/A – Statistics for 2008 reported in Main Campus Stats prior to Center as a campus in 2009.

designation of Public Safety Training

#### **Public Safety Education Campus Arrests and Judicial Referrals**

Other Offenses		On Campus	Public Property
Arrests			
Lieuwal www.Violetieuwa	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
Davis Alexan Violetians	2009	0	0
Drug Abuse Violations	2010	0	0
	2011	0	0
Illegal Weapons Possession	2009	0	0
	2010	0	0
	2011	0	0
Judicial Referrals			
	2009	0	0
Liquor Law Violations	2010	0	0
	2011	0	0
Drug Abuse Violations	2009	0	0
	2010	0	0
	2011	0	0
Illegal Weapons Possession	2009	0	0
	2010	0	0
	2011	0	0

N/A – Statistics for 2007 and 2008 reported in Main Campus Stats prior to designation of Public Safety Training Center as a campus in 2009.

#### **Threat Assessment & Violence Prevention**

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

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

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

#### **Drug and Alcohol Policy**

No student shall distribute, dispense, possess, use, or be under the influence of any alcoholic beverage, malt beverage, or fortified wine or other intoxicating liquor; or unlawfully manufacture, distribute, dispense, possess, or use or be under the influence of any narcotic drug, hallucinogenic drug, amphetamine, barbiturate, marijuana, anabolic steroid, or any other controlled substance, as defined in Schedule I through V of Section 202 of the Controlled Substance Act (21 U.S.C. Section

812) and as further defined by regulation at 21 C.F.R. 1300.11 through 1300.15 or Article 5 of Chapter 90 of the North Carolina General Statutes, as amended from time to time, in any college location as defined below.

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

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

#### **Drug Abuse Prevention Program**

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

#### **Title IX Policy (Sexual Misconduct)**

#### **Procedures:**

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

Wake Technical Community College is committed to providing a learning, working and living environment that promotes respect, responsibility, communication, collaboration, critical thinking, and accountability in an environment free of sexual misconduct and discrimination. Sexual discrimination violates an individual's fundamental rights and personal dignity.

Wake Technical Community College considers sexual discrimination in all its forms to be a serious offense. This plan refers to all forms of sexual discrimination, including: 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 919-866-5701 whjerman@waketech.edu Ms. Benita Clark 919-866-7894 biclark@waketech.edu Mr. Anthony Caison 919-866-6101 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, <u>or</u> 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
- 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:
  <a href="http://www.911rape.org/">http://www.911rape.org/</a>.
- Use of alcohol or other drugs will never function as a defense for any behavior that violates this plan.
- The sexual orientation and/or gender identity of individuals engaging in sexual activity is not relevant to allegations under this plan. For reference to the pertinent state statutes on sex offenses, please see Article 7A of Chapter 14 of the North Carolina General Statutes.

#### **VII. STATEMENT**

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

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

#### Housing

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

#### **Inclement Weather Schedule**

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

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

You can determine if your classes are cancelled by:

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

#### Computer & Internet Acceptable Use Policy

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

The College monitors access to these computing resources and reserves the right, without prior notice to users, to access the College's computing resources and to use any and all information retrieved from the computing resources. **Users do not have an expectation of privacy regarding their use of the computing resources, and by accessing and using the College's computing resources,** users expressly consent to such monitoring, access, and use by the College. Further, information contained on the College's computing resources and in College accounts, including but not limited to e-mail, **may be subject to inspection under the Public Records Law of the State of North Carolina.** 

The College does not attempt to articulate all required or unacceptable behavior by its users. Therefore, each user's judgment on appropriate conduct must be relied upon. To assist in such judgment, users will follow this policy:

- 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 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.
- Users may not connect personal or non-College-owned equipment to the campus network unless given specific authorization prior to the event. Users MAY connect laptops to smart classroom lecterns which were specifically designed for this purpose.
- 10. **Students may not use employee computers.** Most employee computers have access to the faculty/staff networks, colleague, and other sensitive data. For this reason, students may not use employee computers.
- 11. Users learning of the misuse of the College's computing resources or violations of this Acceptable Use Policy should notify the Chief Information Officer or any employee of ITS immediately.

#### Enforcement

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

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

#### **Website Policy**

#### Official Public Web Site

WWW.WAKETECH.EDU (<a href="http://www.waketech.edu/">http://www.waketech.edu/</a>) is the only official website of the college and as such must be administered by college officials and the college webmaster on servers maintained, or external services approved, by Wake Tech's Information Technology Services area.

#### **Student Portal**

All information that pertains to current curriculum students only should be posted in the student portal.

#### **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.

#### Social Networking/Supplemental Online Services

Wake Tech faculty and staff at department head level or higher may, with approval from the appropriate dean, use supplemental online services such as YouTube, Twitter, Facebook, MySpace, and others. Use of such services must be arranged through the webmaster, who will register an account with the social networking service requested, record the username and password, and notify the employee. (Username and password may not be changed.) The employee will be responsible for maintaining the service and may contact the webmaster for assistance as needed.

#### **External Web Sites**

Students, faculty, and staff are not permitted to use Wake Tech's name or official logos, graphics, or information or to state or imply any official association with the college in 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.

#### **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 137; the Northern Wake Campus repository is located in Building D, room 206-B.

#### **Transportation**

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

#### Solicitation

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

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

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

#### A. Expressive Activities

1. On-Campus Groups and Individuals

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

#### 2. Off-Campus Groups and Individuals

#### a. General provisions

Speakers will be granted access to designated areas so long as notice has been provided consistent with this policy, granting access will not conflict with any previously-scheduled events, and the designated area is not temporarily inaccessible or unsafe due to construction, act of God or similar cause.

Access will not be denied because of a speaker's viewpoint or the content of his or her speech.

Access will be granted on a first-come, first-served, space-available basis.

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

#### b. Notice Requirement

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

Upon arriving on campus, speakers must check in with 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:

- Failing to comply with this policy.
- b. Communicating "fighting words" as defined in case law.
- Advocating illegal conduct that is directed to inciting or producing imminent lawless action and is likely to
  incite or produce such action.
- 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.
- Damaging, destroying or stealing College or private property on campus.
- h. Possessing or using firearms, explosives, or dangerous weapons or substances.
- i. Obstructing the free flow of pedestrian or vehicular traffic.

#### **B. Distribution of Written Materials**

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

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

#### C. Posting of Messages or Materials

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

#### D. Commercial Use of Bulletin Boards

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

#### **E. Donations and Contributions**

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

#### F. Goods and Services

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

Click here for required form, Solicitation Request Form

**END SOLICITATION POLICY -**

#### **CAMPUS USE POLICIES**

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

#### **Cell Phones**

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

#### **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.

#### **Emergency Exit Procedures**

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

#### Food and Beverages

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

#### **Health and Safety**

#### **Insurance and Accidents**

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

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

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

#### **Health and Safety Program Responsibility**

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

#### **Notification of Accidents**

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

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

#### **Administering of First Aid**

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

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

The decision to call Emergency Medical Services or other medical personnel rests with the Director of Security Services or his/her designee and the injured party. The College will make appropriate efforts to secure transportation for the sick or

injured student, employee, or visitor. The College will not transport nor assume responsibility for the transport of other sick or injured persons.

#### Media Coverage of College Activities

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

#### **Off-Campus Sites**

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

#### Pets

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

#### Skate Boarding/Rollerblading

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

#### Smoking/Tobacco-Free Campus

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

#### **Policy**

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

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

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

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

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

#### **Definitions**

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

#### Signage

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

#### **Policy Implementation**

Wake Tech shall communicate the tobacco-free policy through a comprehensive campaign that shall include printed information in student and employee handbooks, announcements at college-related events, and appropriate signage in

buildings and around campus. Likewise, an enforcement protocol, identifying consequences for students, employees, and visitors who violate the policy, shall be created and communicated to all.

#### **Policy Implementation Dates**

Northern Wake Campus: August 15, 2007 Health Sciences Campus: January 1, 2008 Plastics Center in Zebulon: January 1, 2008 Public Safety 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..

#### Student Centers

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

#### **Telephone Calls**

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

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

#### **Traffic Rules and Regulations**

Ordinance Governing Traffic, Parking, and Registration of Motor Vehicles

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

Revised June 2011

http://facilities.waketech.edu/parkingtraffic.php

#### Article I. General Provisions

#### Section 1. Definitions

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

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

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

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

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

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

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

#### Section 2. Authority

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

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

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

#### Section 3. Violation of Ordinance

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

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

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

#### **Article II. Vehicle Registration and Parking Permits**

#### Section 1. Permit Eligibility

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

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

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

**Parking permits** become invalid under the following conditions:

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

#### Section 2. Registration of Motor Vehicles.

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

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

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

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

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

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

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

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

#### Article III. Parking and Traffic Rules and Regulations

#### **Section 1. General Provision**

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

#### Section 2. Rules and Regulations

- No vehicle shall be driven in a careless or reckless manner or in a direction opposite to that indicated by appropriate signs or markings on roadways that are designated as one-way streets.
- Wake Tech campuses shall be deemed business districts, with a speed limit of 20 miles per hour.

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

#### Section 3. Enforcement

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

#### Fines

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

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

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

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

#### **Towing**

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

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

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

#### **Notice of North Carolina State Law Concerning Towed Vehicles**

Wake Tech provides a petition/appeal procedure for towing and parking violations.

Additionally, North Carolina G.S. 20-219.11 provides the following:

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

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

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

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

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

#### Section 4. Suspension of Parking Privileges

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

#### Section 5. Failure to Settle Fines, Fees, and Charges

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

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

#### Section 6. Petition/Appeal Procedure

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

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

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

#### **Appeal Hearings**

Individuals whose driving or parking privileges are suspended or revoked or whose vehicle is towed will be allowed to appear before the Traffic Appeals Review Board and provide relevant information in addition to the information provided in writing. A written request for an appeal hearing must be submitted directly to the Director of Security Services and received within 14 days of the date of the decision giving rise to the appeal. The individual will be notified in writing of the hearing date, time, and location. Each person is permitted one continuance of the hearing if he/she is unable to attend on a specified date.

#### The Traffic Appeals Review Board

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

The Board Administrator will chair the hearing: bring the hearing to order and introduce the appellant, provide written or oral summation of the ruling, disperse completed appeal forms to each member of the board, maintain time restrictions with regard to testimony, dismiss the appellant, and call for a vote from each member of the Board. The Board

Administrator will make note of the decision regarding the appeal. The Administrator is a non-voting member of the Board, except when it is necessary to break a tie vote.

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

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

#### **Section 7. Judgment Factors**

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



Remember to check the online College Catalog for the most up-to-date information at <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>

#### I. GENERAL

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.

- A. 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.
- B. 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.
- C. 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.
- D. 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.
- E. Students have the right to expect a safe environment that ensures the continuity of the educational process.
- F. Students have the right to appeal academic integrity policy penalties See Section III.D.
- G. Students have the right to appeal course grades See Section III.E.
- H. Students have the right to grieve student code of conduct sanctions See Section IV.C.2
- I. Students have the right to a fair hearing of grievances See Section VI.

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

- A. Respecting the rights of others.
- B. 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.
- C. Respecting the property of others, and the property, equipment, facilities, and programs of the college.
- D. Refraining from actions that endanger the health, safety, or welfare of any member of the college community or its guests.

E. Complying with the normative standards, rules, and regulations of the college as well as with federal, state, and local laws.

#### 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:

- 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 form 1069 to a student conduct officer for appropriate recordkeeping.

#### D. Academic Penalty Appeal Procedures

- 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.
- 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).
- 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.
- 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

Students are expected to conduct themselves in accordance with generally-accepted standards of scholarship and conduct. 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.
- 3. 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.
- 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 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 verbal or physical actions which threaten or endanger an individual's health or safety.
- 9. Violation of the Sexual Harassment Policy.
- Intentional obstruction or disruption of teaching, administration, or disciplinary proceedings or other college
  activities, including public service functions and other duly-authorized activities, on college premises.
- 11. 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.
- 12. 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.
- 13. Possession of firearms, fireworks, explosives, incendiaries, knives of any kind, and other types of weapons on college property or at any college function (except in connection with a college-approved activity).
- 14. 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.

- 15. Gambling or unauthorized raffles on college premises or at college-sponsored or college-supervised functions.
- 16. Smoking and/or use of any forms of tobacco products and e-cigarettes on all properties owned or rented by the college.
- 17. Violation of college regulations regarding the operation and parking of motor vehicles.
- 18. Forgery, alteration, or misuse of college documents, records, or instruments of identification with intent to deceive.
- 19. Failure to comply with instructions of college officials acting in performance of their duties.
- 20. Violation of the terms of disciplinary probation or any college regulation during the period of probation.
- 21. 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.
- 22. Violation of a local, state, or federal criminal law on college premises adversely affecting the college community's pursuit of its proper educational purposes.
- 23. The unauthorized access or attempt to access, manipulation, or retrieval of files, programs, or data from any college computer system.
- 24. Disruption, disturbance, or interference with any classroom activity or staff operation by the playing of loud, threatening, or obscene music.
- 25. Engaging in any action that is disruptive to orderly classroom instruction without limitations to the use of cell phones or pager calls; students are therefore required to disengage all such devices when present in a classroom.
- 26. 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, and cafeteria.
- 27. Willfully encouraging others to commit any of the acts that have been herein prohibited.

#### 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.

- 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.
  - 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.
  - A completed form 1069 must be submitted to a student conduct officer within 24 hours of the suspension.
  - 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:

- 4. **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.
- 5. 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.
- 6. **Restitution:** Paying for damaging, misusing, destroying, or losing property belonging to the college, college personnel, or students.
- 7. **Withholding:** Transcript, diploma, or right to register will be withheld (denied) when financial obligations are not met.
- 8. **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.
- Expulsion: Dismissing a student from campus for an indefinite period. The student loses his/her student status. The student may be readmitted to the college only with the approval of the Vice President of Student Services.
- 10. 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.
- 11. 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.
- 12. **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.

#### C. 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, these steps must be followed by the reporting instructor or other college official:

- a. The instructor or official will give the student a verbal warning for a minor infraction.
- b. If the violation is not minor or for a subsequent violation, the instructor or college official will give the student a written reprimand and forward the report on a form 1069 to a student conduct officer. Form 1069 is available online at <a href="http://eaglesnest.waketech.edu">http://eaglesnest.waketech.edu</a>. The student should be referred to a student conduct officer or designee.
- c. After referring the student to the Student Conduct Officer or designee and depending upon the severity of the incident, the instructor or official may impose an interim suspension. Instructors

must notify the department head, division dean, or college official immediately upon giving the student an interim suspension. An interim suspension should be given if the behavior is violent or the disruption creates an atmosphere in which classroom instruction cannot continue. Interim suspensions can also be given after verbal and written warnings have been issued to the student. The suspension should not exceed more than two class periods.

- d. The student should be referred to the Student Conduct Officer or designee and may not return to class until he or she has met with the officer or designee. Once the student meets with the Student Conduct Officer or designee a form will be given to the student, indicating that he or she can return to class when applicable.
- e. The instructor or college official must send a Student Code Violation Report, Form 1069, within two (2) business days of the incident to the Student Conduct Officer or designee and department head indicating action taken. Form 1069 is available online at http://eaglesnest.waketech.edu.
- 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 of 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.

- 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 one year 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.
- 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 <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>

## **CONTINUING EDUCATION (NON-CREDIT)**

### **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: <a href="http://corporatesolutions.waketech.edu">http://corporatesolutions.waketech.edu</a> Dean: Associate Vice President Jamie Glass Phone: 919-532-5587 Email: <a href="mailto:jglass@waketech.edu">jglass@waketech.edu</a> 1. Industry Specific Solutions 2. Online Solutions 3. Training & Corporate Solutions	

### **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 <u>WebAdvisor</u>, 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 <u>Student Record Inquiry</u> form.

### GRADING POLICY

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

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

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

### **Adult High School**

Adult High School classes use the A-F system.

Grade	<b>Explanation</b>
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.

<sup>\*</sup>CEU's are not awarded with these grades.

A course schedule is available in an interactive online format at <a href="http://ceregistration.waketech.edu">http://ceregistration.waketech.edu</a>. 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 <a href="http://www.waketech.edu/about-wake-tech/locations/directions">http://www.waketech.edu/about-wake-tech/locations/directions</a>.

### 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 <u>interactive online schedule</u>. 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

<sup>\*</sup>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, 2013, there will be a one-time fee of \$35.00 for all GED **paper-based** tests. Students taking the GED **computer-based** test will be required to pay a fee through the Pearson VUE GED Testing Center. For more information regarding GED fees contact 919-334-1527.

### 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 <a href="http://computertechnology.waketech.edu">http://computertechnology.waketech.edu</a>.

### 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 <u>Administrative Code 12 NCAC 9B .0101/9B .0111</u> and Admission of trainees <u>12 NCAC 09B .0203 ADMISSION OF</u>

### 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 <a href="http://catalog.waketech.edu">http://catalog.waketech.edu</a>

### **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 <u>WebAdvisor</u> for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully <u>online</u>.

Program Name	Division To Contact	Program Code
Accounting – AAS Degree	Business & Public	A25100
Accounting – <i>Diploma</i>	Services Technologies	D25100
Accounting: Core – <i>Certificate</i>	_	C25100C
Income Tax Preparer – <i>Certificate</i>		C25100B
Payroll Accounting Clerk - Certificate		C25100A
Advertising and Graphic Design – AAS Degree	Computer	A30100
Graphics Design – Certificate	Technologies	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 &	A60410
Agricultural Systems Technology – <i>Diploma</i>	Technologies	D60410
Air Conditioning, Heating, and Refrigeration Technology – AAS Degree	Applied Engineering &	A35100
Air Conditioning, Heating, and Refrigeration Technology - Diploma	Technologies	D35100A
Air Conditioning, Heating, and Refrigeration Technology - Certificate	recimologics	C35100R
Commercial - Certificate		C35100D
Design - Certificate		C35100D
Architectural Technology – AAS Degree	Applied Engineering &	A40100
Architectural CAD - Certificate	Technologies	C40100A
Associate Degree Nursing – AAS Degree	Health Sciences	A45110
	nealth Sciences	
Associate Degree Nursing (LPN to RN Advanced Placement Option) – AAS Degree	0.11	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 General Education – A.G.E. Degree	General Education	A10300
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 &	A60160
	Technologies	
Baking and Pastry Arts – AAS Degree	Business & Public	A55130
Baking and Pastry Arts – <i>Diploma</i>	Services Technologies	D55130
Baking and Pastry Arts - Certificate		C55130A
BioPharmaceutical Technology – AAS Degree	Applied Engineering &	A20180
Applied Biotechnology - Certificate	Technologies	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	A25120
Business Core – Certificate	Services Technologies	C25120D
Career Success – Certificate	25.11555 1001110109100	C25120G
Customer Service – Certificate		C25120B
Entrepreneurship – Certificate		C25120D
International Marketing - Certificate		C25120C
Leadership - Certificate		C25120W
Sales Development - Certificate		C25120A

Program Name	Division To Contact	Program
		Code
Business Administration/Human Resources Management – AAS Degree	Business & Public	A2512C
Business Administration/Human Resources Administration - Certificate	Services Technologies	C2512CB
Business Administration/Human Resources Management: Core - Certificate		C2512CA
Business Analytics – AAS Degree	Business & Public	A25350
Business Intelligence - Certificate	Services Technologies	C25350A
Business Analytics – <i>Certificate</i>		C25350B
Civil Engineering Technology – AAS Degree	Applied Engineering	A40140
Civil Design - Certificate	& Technologies	C40140A
Computed Tomography Technology - Certificate	Health Sciences	C45200
Computer Engineering Technology - AAS Degree	Applied Engineering &	
Computer Engineering Technology – AAS Degree		A40160
O and the later words of Table 1 and 1000	Technologies	405000
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 – <i>Certificate</i>	Technologies	C25130C
JAVA Programming – Certificate	100	C25130A
Visual BASIC Programming – <i>Certificate</i>		C25130B
Visual C# Programming - Certificate		C25130D
Advanced Computer Programming – <i>Certificate</i>		C25130G
Fundamentals of Computer Programming - Certificate	O	C25130H
Computer Technology Integration - Data Storage & Virtualization - AAS Degree	Computer Technologies	A25500D
Construction Equipment Systems Technology – AAS Degree	Applied Engineering &	A60450
Construction Equipment Systems Technology – <i>Diploma</i>	Technologies	D60450
Hydraulics, Engines, and Transmission – Certificate		C60450BB
Fuel Injection, Electrics, and Electronics – <i>Certificate</i>		C60450BC
Construction Management Technology – AAS Degree	Applied Engineering &	A35190
Construction Management Technology: Basic - Certificate	Technologies	C35190C
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 – <i>Diploma</i>	Services Technologies	D55150
Culinary Arts - Certificate		C55150A
Database Management : Administrator – AAS Degree	Computer	A25150
Database Management : Developer – AAS Degree	Technologies	A25150B
Database Developer - Oracle - Certificate		C25150B
Database Administration - Certificate	<u> </u>	C25150A
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
Early Childhood Education – AAS Degree	Business & Public	A55220
Early Childhood Education – AAS Degree  Early Childhood Education – Diploma	Services Technologies	D55220A
ECE – Certificate	Jervices recimologies	
		C55220D
Infant/Toddler Care and CDA - Certificate		C55290
School Age – Certificate		C55220E
Electrical Systems Technology – AAS Degree	Applied Engineering &	A35130
Electrical Systems Technology – <i>Diploma</i>	Technologies	D35130
Electrical Systems Technology - Certificate		C35130
Electronics Engineering Technology – AAS Degree	Applied Engineering &	A40200
Basic Electronics – Certificate	Technologies	C40200A
PLC Programming – <i>Certificate</i>		C40200B
Microcomputer Programming - Certificate		C40200D
Emergency Medical Science – AAS Degree	Health Sciences	A45340
Emorganay madada dolonda - AAd Degree	i icaitii Odielices	/ \ <del>-</del>

Program Name	Division To Contact	Program Code
Environmental Science Technology – AAS Degree	Applied Engineering &	A20140
Environmental Education - Certificate	Technologies	C20140A
Esthetics Technology - Certificate	Business & Public Services Technologies	C55230
Fire Protection Technology – AAS Degree	Business & Public	A55240
Fire Protection Technology: Basic – Certificate	Services Technologies	C55240A
Loss Control/Investigation – Certificate		C55240B
Fire Management – Certificate		C55240C
Food Service Technology – Diploma	Business & Public	D55250
Food Service Technology - Certificate	Services Technologies	C55250
General Occupational Technology – AAS Degree	Health Sciences	A55280
Geomatics Technology – AAS Degree	Applied Engineering & Technologies	A40420
Global Logistics Technology – AAS Degree	Business & Public	A25170
Global Logistics Technology: Basic – Certificate	Services Technologies	C25170A
Distribution Management - Certificate		C25170B
Health and Fitness Science – AAS Degree	Health Sciences	A45630
Hospitality Management – AAS Degree	Business & Public	A25110
Hospitality Management – <i>Diploma</i>	Services Technologies	D25110
Entrepreneur – Certificate		C25110C
Event Management – <i>Certificate</i>		C25110A
Hotel Management – <i>Certificate</i>		C25110B
Restaurant Management - Certificate		C25110D
Human Services Technology – AAS Degree	Health Sciences	A45380
Human Services Technology: Basic – Certificate		C45380
Human Services Technology/Substance Abuse – AAS Degree	Health Sciences	A4538E
Substance Abuse - Certificate		C4538E
Industrial Engineering Technology – AAS Degree	Applied Engineering &	A40240
Advanced Quality – Certificate	Technologies	C40240C
Industrial Management - Certificate		C40240A
Quality Assurance - Certificate		C40240B
Information Systems Security – AAS Degree	Computer	A25270
Cisco Security - Certificate	Technologies	C25270C
Red Hat Security Specialist - Certificate		C25270R
Interior Design – AAS Degree	Applied Engineering & Technologies	A30220
Landscape Architecture Technology – AAS Degree	Applied Engineering &	A40260
Landscape Architecture - Certificate	Technologies	C40260A
Lateral Entry - Certificate	Business & Public Services	C55430
•	Technologies	
Magnetic Resonance Imaging - Diploma	Health Sciences	D45800
Mechanical Drafting Technology – AAS Degree	Applied Engineering &	A50340
Mechanical Drafting Technology – <i>Diploma</i>	Technologies	D50340A
Mechanical Drafting Technology - Certificate		C50340B
Mechanical Engineering Technology – AAS Degree	Applied Engineering &	A40320
Engineering Management – <i>Certificate</i>	Technologies	C40320E
Materials Engineering – Certificate		C40320D
Mechanical Design – <i>Certificate</i>		C40320B
Thermal Mechanics - Certificate		C40320C
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 – <i>Diploma</i>		D25310
Medical Document Specialist – Certificate		C25310C
Medical Office Specialist - Certificate		C25310A
Networking Technology – AAS Degree	Computer	A25340
Cisco Certified Network Associate (CCNA) - Certificate	Technologies	C25340C
Cisco Certified Network Professional (CCNP) - Certificate	Ĭ	C25340I
Data Storage and Virtualization - Certificate		C25340L
Linux/Red Hat Administration - Certificate		C25340K
Microsoft Certified Systems Administrator (MCSA) - Certificate		C25340J

Program Name	Division To Contact	Program Code
Office Administration – AAS Degree	Computer Technologies	A25370
Office Administration – <i>Diploma</i>	Compater recimenegies	D25370
Office Specialist – <i>Certificate</i>		C25370A
Office Documents - Certificate		C25370B
Microsoft Office Specialist - Certificate		C253770C
Office Administration/Legal – Certificate	Computer Technologies	C2537AA
Pharmacy Technology – AAS Degree*	Health Sciences	A45580
Pharmacy Technology – <i>Diploma</i> *		D45580
Phlebotomy - Certificate	Health Sciences	C45600
Plumbing - Diploma	Applied Engineering &	D35300
Introduction to Plumbing – Certificate	Technologies	C35300C
Plumbing Concepts I – Certificate		C35300D
Plumbing Concepts II – Certificate		C35300E
Radiography - AAS Degree	Health Sciences	A45700
Simulation and Game Development – AAS Degree*	Computer	A25450
Game Programming and Design – <i>Diploma</i>	Technologies	D25450A
Modeling and Animation – <i>Diploma</i>		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
Surgical Technology - Diploma	Health Sciences	D45740
Therapeutic Massage - Diploma	Health Sciences	D45750
Web Technologies – AAS Degree	Computer	A25290
Mobile Content Development - Diploma	Technologies	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 – Diploma	Applied Engineering &	D50420
Welding Technology - Certificate	Technologies	C50420B

### \*Collaborative Agreements

**Simulation and Game Development AAS degree** – Level III instruction Service Agreement with Pitt Community College, Nash Community College, and Vance-Granville Community College

Pharmacy Technology AAS Degree and Pharmacy Technology Diploma with Johnston Community College

Geospatial Technology AAS Degree with Edgecombe Community College

### **Special Notes**

Students should contact their advisors for updates to program offerings. Students admitted to programs that require a clinical or co-op component may be required to provide the college with an official criminal background check in order to meet the requirements of the clinical or co-op site. Convictions for certain crimes and/or evidence of drug use may disqualify students for participating in clinical or co-op experiences, which would limit their progress toward graduation.

The length of our programs is set by the North Carolina Community College System and published in 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: <a href="http://curred.waketech.edu/">http://curred.waketech.edu/</a>

## **Applied Engineering & Technologies Division**

Dean Patti Godin
Phone: 919-866-5170
Email: pagodin@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 <u>WebAdvisor</u> for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully <u>online</u>.

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
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
Civil Design - Certificate	C40140A
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
Diesel and Heavy Equipment Technology – AAS Degree	A60460
Diesel and Heavy Equipment Technology - <b>Diploma</b>	D60460
Electrical Systems Technology – AAS Degree	A35130
Electrical Systems Technology – <i>Diploma</i>	D35130
Electrical Systems Technology - Certificate	C35130
Electronics Engineering Technology – AAS Degree	A40200
Basic Electronics – Certificate	C40200A
PLC Programming – Certificate	C40200B
Microcomputer Programming - <i>Certificate</i>	C40200D
Environmental Science Technology – AAS Degree	A20140
Environmental Education – Certificate	C20140A
Geomatics Technology – AAS Degree	A40420
Industrial Engineering Technology – AAS Degree	A40240
Advanced Quality – Certificate	C40240C
Industrial Management – Certificate	C40240A
Manufacturing Process Control - Certificate	C40240D
Quality Assurance – Certificate	C40240B

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Interior Design – AAS Degree	A30220
Landscape Architecture Technology – AAS Degree	A40260
Landscape Architecture - Certificate	C40260A
Mechanical Drafting Technology – AAS Degree	A50340
Mechanical Drafting Technology – <i>Diploma</i>	D50340A
Mechanical Drafting Technology - Certificate	C50340B
Mechanical Engineering Technology – AAS Degree	A40320
Engineering Management – Certificate	C40320E
Materials Engineering – Certificate	C40320D
Mechanical Design – Certificate	C40320B
Thermal Mechanics - Certificate	C40320C
Plumbing - Diploma	D35300
Introduction to Plumbing – Certificate	C35300A
Plumbing Concepts I – Certificate	C35300B
Plumbing Concepts II – Certificate	C35300E
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

Gener	al Educ	ation Courses	
COM	120	Intro Interpersonal Com	.3
ENG	110	Freshman Composition	
HUM	121	The Nature of America	
PHY	121	Applied Physics I	
PSY	118	Interpersonal Psychology	
Major	Course		
ELN	112	DC/AC Electricity	
HET	110	Diesel Engines	
HET	114	Power Trains	.5
HET	134	Mechanical Fuel Injection	
HYD	134	Hyd/Hydrostatic Const	
PME	111	Planters and Sprayers	
PME	112	Consumer Products	
PME	121	Component Controls	
PME	122	Agricultural Telematics	
TRN	110	Intro to Transportation Tech	
TRN	120	Basic Transportation Electricity	
TRN	120A	Basic Transportation Electricity Lab	
TRN	140	Transportation Climate Control	2
TRN	170	PC Skills for Transportation	2
Major	Elective	ne 1	
		from the following courses	
ELN	110	Survey of Electronics	3
ELN	113	Electronic Fuel Injection	
HET	115	Electronic Engines	
HET	128	Med/Heavy Duty Tune-up	
HET	192	Selected Topics	
PME	211	Adv Equipment Repair	
1 IVIL	211	Auv Equipment repair	
	Elective		
Select	2 hours	from the following courses	
HYD	110	Hydraulics/Pneumatics I	.3
HYD	111	Mobile Hydraulic Systems	
HYD	112	Hydraulics/Med/Heavy Duty	.2
Major	Elective	ne 2	
		from the following courses	
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	. I
WLD	112	Cutting Processes	
		equirements71 Credit Hou	
Siadu	audii N	equirements 7 i Credit Hou	3

## 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 Edu	ucation Courses			
ENG 110	Freshman Composition3			
COM 120	Interpersonal Communication3			
HUM 121	The Nature of America3			
PHY 121	Applied Physics I4			
PSY 118	Interpersonal Psychology3			
Major Cours	ses			
AHR 110	Introduction to Refrigeration5			
AHR 111	HVACR Electricity3			
AHR 112	Heating Technology4			
AHR 113	Comfort Cooling4			
AHR 114	Heat Pump Technology4			
AHR 115	Refrigeration Systems2			
AHR 130	HVAC Controls3			
AHR 133	HVAC Servicing4			
AHR 151	HVAC Duct Systems I2			
AHR 160	Refrigerant Certification1			
AHR 180	HVAC Customer Relations1			
AHR 211	Residential System Design3			
AHR 212	Advanced Comfort Systems4			
AHR 213	HVACR Building Code2			
AHR 215	Commercial HVAC Controls2			
AHR 225	Commercial System Design3			
AHR 240	Hydronic Heating2			
AHR 245	Chiller Systems2			
AHR 250	HVAC System Diagnostics2			
AHR 263	Energy Management2			
Graduation	Graduation Requirements71 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.

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

Major	Cours	ses	
AHR	110	Introduction to Refrigeration	5
AHR	111	HVACR Electricity	3
AHR	112	Heating Technology	
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	
AHR	151	HVAC Duct Systems I	2
AHR	160	Refrigerant Certification	1
AHR	213	HVACR Building Code	
Gradu	ation	Requirements	

### 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.

Completion Requirements			18 Credit Hours
AHR	133	HVAC Servicing	4
AHR	130	HVAC Controls	3
AHR	113	Comfort Cooling	4
AHR	112	Heating Technology	4
AHR	111	HVACR Electricity	3

### 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	
AHR	112	Heating Technology	4
AHR	160	Refrigeration Certification	1
AHR	180	HVAC Customer Relations	
AHR	240	Hydronic Heating	2
AHR	245	Chiller Systems	2
		Requirements	

### **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

Comp	oletion	Requirements	18 Credit Hours
AHR	225	Commercial System Design	3
AHR	213	HVACR Building Code	2
AHR	211	Residential System Design	3
AHR	180	HVAC Customer Relations	
AHR	160	Refrigeration Certification	
AHR	113	Comfort Cooling	4

# 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

ucation Courses	
Expository Writing	3
Professional Research and Reporting	3
Critical Thinking	3
Algebra and Trigonometry	3
ses	
Introduction to Architectural Technology	3
Building Codes	3
Elementary Structures for Architecture	4
Light Construction Technology	3
Commercial Construction Technology	3
Design Project	4
Architectural 3-D CAD	3
Environmental Systems	4
Site Planning	3
Survey of Architecture	3
Digital Architecture	2
Green Building and Design Concepts	3
ives	
Survey of LAR	3
Requirements72 Credit	Hours
	Expository Writing Professional Research and Reporting Critical Thinking Algebra and Trigonometry General Psychology  ses Introduction to Architectural Technology Construction Materials and Methods Residential Architectural Technology Architectural CAD Architectural CAD Lab Building Codes Specifications and Contracts Elementary Structures for Architecture Light Construction Technology Commercial Construction Technology Design Project Advanced Architectural CAD Architectural 3-D CAD Environmental Systems Site Planning Survey of Architecture Digital Architecture Blueprint Reading/Constr Green Building and Design Concepts

### Architectural CAD Certificate - C40100A

-Day and Evening

The evening Architectural CAD certificate is designed for students employed full-time in architectural engineering or construction positions that require microcomputer knowledge. Courses include basic hands-on architectural drafting in residential construction and computer courses in different types of computer-aided drafting software from basic to advanced levels.

Opportunities for employment exist as junior technicians within architectural practices and engineering and contracting companies.

Courses in this program can be transferred directly into the Architectural Technology associate degree program.

ARC	111	Introduction to Architectural Technology.	3
ARC	114	Architectural CAD	2
ARC	114A	Architectural CAD Lab	1
ARC	220	Advanced Architectural CAD	2
ARC	221	Architectural 3-D CAD	3
CIV	125	Civil/Surveying CAD	3
Com	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

Conc	ui Luc	oution courses	
COM	120	Interpersonal Communication	3
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	
Major	Cours	ees	
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	
AUT	151	Brake Systems	3
AUT	151A	Brake Systems Lab	1
AUT	161	Basic Auto Electricity	5
AUT	163	Adv Auto Electricity	
AUT	163A	Adv Auto Electricity Lab	1
AUT	171	Auto Climate Control	4
AUT	181	Engine Performance 1	3
AUT	183	Engine Performance 2	4
		-	

Grad	uation	Requirements 65 Credit Hou	rs
COE		Co-op Work Experience I	
COE	112	Co-op Work Experience II	.2
COE	111	Co-op Work Experience I	.1
AUT	114	Safety and Emissions	2
Selec	t 2 hour	s from the following courses	
Majo	Electiv	/es	
AUT	281	Adv Engine Performance	.3
AUT	231A	Man Trans/Ax/Drtrains Lab	.1
AUT	231	Man Trans/Axles/Drtrains	.3
AUT	221A	Auto Transm/Transax Lab	.1
AUT	221	Auto Transm/Transaxles	.3
AUT	213	Automotive Servicing 2	2

# BIOPHARMACEUTICAL TECHNOLOGY

The Biopharmaceutical Technology curriculum is designed to prepare graduates for employment in pharmaceutical manufacturing and related industries, including chemical quality assurance, microbiological quality assurance, product inspection, documentation review, manufacturing, and product/process validation.

# Biopharmaceutical Technology Degree - A20180

	ral Edu	cation Courses			
ENG	111	Expository Writing			
ENG	114	Professional Research and Reporting	3		
HUM	110	Technology and Society	3		
MAT	121	Algebra/Trigonometry			
PSY	118	Interpersonal Psychology			
Major	Electi	ves			
Select	t 3 hour	rs from the following courses			
ACA		Professional Transition	1		
COE	111	Co-op Work Experience I	1		
COE	112	Co-op Work Experience I			
COE	113	Co-op Work Experience I			
COE	121	Co-op Work Experience II			
COE	122	Co-op Work Experience II	2		
ENV	110	Environmental Science	3		
ENV	110A	Environmental Science Lab	1		
ENV	232	Site Assessment and Remediation	3		
MAT	151	Statistics I	3		
MAT	151A	Statistics I Lab	1		
Major	Cours	es			
BIÓ	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			
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			
PTC	222	Pharmaceutical Process Control			
PTC	226	Validation			
PTC	228	Pharmaceutical Issues			
Gradu	Graduation Requirements67 Credit Hours				

**General Education Courses** 

### 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.

Comp	oletion	Requirements	15 Credit Hours
PTC	110	Industrial Environment	3
ENV	232	Site Assessment and Remediation	3
ENV	110A	Environmental Science Lab	1
ENV	110	Environmental Science	3
BPM	110	Bioprocess Practices	5

# Biopharmaceutical Regulations Certificate - C20180B

Comr	aletion	Requirements	12 Credit Hours	•
PTC	110	Industrial Environment		3
CHM	131A	Introduction to Chemistry Lab		•
CHM	131	Introduction to Chemistry		٠
BPM	110	Bioprocess Practices		

# Biopharmaceutical Manufacturing and Quality Certificate - C20180C

Completion Requirements15 Credit Hour				
PTC	222	Pharmaceutical Process Control	3	
PTC	210	Pharmaceutical Industrial Processes	4	
PTC	120	Pharmaceutical Quality Control	4	
		Organic and Biochemistry		

# Advanced Biopharmaceutical Practices Certificate - C20180D

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

### Pharmaceutical Basics Certificate - C20180E

BPM	110	Bioprocess Practices	5
	112		2
PTC	110	Industrial Environnent	
PTC	120	Pharmaceutical Quality Control	4
PTC	228	Pharmaceutical Issues	1
Completion Requirements15 Credit Hours			

# 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

Company Education Courses

Gene	rai Edu	cation 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
	_		
	Cours		
HET	110	Diesel Engines	. 6
HET	114	Power Trains	. 5
HET	125	Preventative Maintenance	
	134	Mechanical Fuel Injection	
HYD	134	Hydraulic/Hydrostatic Construction	
PME	117	Equipment Braking Systems	
PME	118	Undercarriage Components	
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	
TRN	140	Transportation Climate Control	2
TRN	170	PC Skills for Transportation	. 2
N4 - !	<b>-</b> 145		
-	Electiv		
		rs from the following courses	_
ELN	110	Survey of Electronics	٠. ز
ELN	112	Diesel Electronics System	
ELN	113	Electronic Fuel Injection	
HET	115	Electronic Engines	٠. ز
HET	128	Medium/Heavy Duty Tune-up	
HET	192	Selected Topics	. 2
Maior	Electiv	ves 2	
		s of the following courses	
HYD		Hydraulics/Pneumatics I	2
HYD		Mobile Hydraulic Systems	
HYD		Hydraulics/Medium/Heavy Duty	
טוח	112	Hydraulics/Medium/Heavy Duty	. 2
Major	Electiv	ves 3	
		s from the following courses	
COE		Co-op Work Experience I	. 1
COE		Co-op Work Experience I	
WLD		Cutting Processes	
		Requirements	

# Construction Equipment Systems Technology Diploma - D60450

Gene	ral Edu	cation Courses
<b>ENG</b>	110	Freshman Composition
PSY	118	Interpersonal Psychology

Major	Course	es es	
HET	110	Diesel Engines	6
HET	114	Power Trains	5
HET	134	Mechanical Fuel Injection	3
HYD	134	Hydraulic/Hydrostatic Construction	
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	
Major	Elective	es	
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
Gradu	ation D	aquiromonte	17 Crodit 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.

### 

		Requirements	
HYD	112	Hydraulics/Medium/Heavy Duty	2
HYD	111	Mobile Hydraulic Systems	3
		Hydraulics/Pneumatics I	
		rs of the following courses	
•	r Electi		
HET	114	Power Trains	5
HET	110b	Diesel Engines Part 2	2

# 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	Cours	es	
HET	134	Mechanical Fuel Injection	3
TRN	120	Basic Transportation Electricity	5
TRN	120A	Basic Transportation Electricity Lab.	
		,	
Major	Electiv	/es	
Selec	t 4 hour	s 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	
HET	128	Medium/Heavy Duty Tune-up	2
HET	192	Selected Topics	2
Comp	letion	Requirements	13 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 MAT 121\* Algebra/Trigonometry I .......3 Humanities/Fine Arts Elective +......3 Social/Behavioral Science Elective + ......3 **Major Electives 1** Select 3 credit hours from the following courses C++ Programming ......3 CSC 134 CSC 151 JAVA Programming......3 **Major Electives 2** Select 3 hours from the following courses Visual BASIC Programming .......3 CSC 139 CTS 220 Advanced Hardware/Software Support......3 ELC 128 PCI 170 DAQ and Control ......4 **Major Courses**

uation	Requirements	73 Credit Hours
120	Linux/UNIX Single User	3
110	Operating System Concepts	3
275	Troubleshooting	2
235	Data Communication Systems	4
233	Microprocessor Systems	4
232	Introduction to Microprocessors	4
152	Fabrication Techniques	2
133	Digital Electronics	4
131	Analog Electronics I	4
131A	Circuit Analysis I Lab	
131	Circuit Analysis I	4
115	Intro to Technology	3
120	Hardware/Software Support	3
133	C Programming	3
112	Co-op Work Experience I	
115	Introduction to Prog and Logic	3
	112 133 120 115 131 131A 131 133 152 232 233 235 275 110 120	112 Co-op Work Experience I

+Several courses are available as Humanities/Fine Arts and Social/Behavioral Science Electives. Please see your advisor for available courses.

Cooperative education or an equivalent is required for graduation. Students must have approval from the Dean and pre-register with the Co-op office. The co-op work period may be taken over two semesters with 10 hours each semester as COE 111 and COE 121.

# 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 computeraided 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

Gene	ral Edu	cation Courses	
COM	120	Intro to Interpersonal Communication	. 3
<b>ENG</b>	111	Expository Writing	. 3
HUM	110	Technology and Society	
MAT	121	Algebra and Trigonometry	. 3
PSY	118	Interpersonal Psychology	. 3
•	Electi		
		edit hours from the following	
		Co-op Work Experience I	
COE	112	Co-op Work Experience I	
CIV	250	Civil Engineering Tech Project	2

viajoi	Cours	000	
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	
CEG	230	Subdivision Planning and Design	
CIV	111	Solis and Foundations	
CIV	125	Civil/Surveying CAD	3
CIV	215	Highway Technology	
CIV	221	Steel and Timber Design	
CIV	230	Construction Estimating	3
CIV	240	Project Management	3
EGR	115	Introduction to Technology	3
EGR	251	Statics	
GIS	111	Introduction to GIS	3
GIS	112	Introduction to GPS	3
SRV	110	Surveying I	4
SRV	111	Surveying II	4
SRV	260	Field and Office Practices	2
Gradi	uation	Requirements	76 Credit Hours

# Civil Engineering Technology: Civil Design Certificate - C40140A

- Day

The Civil Engineering Technology Certificate allows students to complete the certificate in two to three semesters. Students are then able to work in the civil field. This certificate is designed to address the all time high demand for technicians, and to train for jobs in these fields with just a small amount of college. This certificate is for students that are not sure which path they would like to follow. The Civil Design certificate will allow you to work as an engineering technician in engineering offices throughout the country. One job function would be to place ideas down on the computer by working directly with an engineer.

SRV	4 4 6	Surveying I	
GIS	111	Introduction to GIS	3
DFT	119	Basic CAD	2
		Civil/Surveying Cad	
CEG	151	CAD for Engineering Technology	3

# 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.

<sup>\*</sup>May substitute MAT 161 or MAT 171.

# Construction Management Technology Degree - A35190

Gene	ral Edu	cation 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	Cours	es	
ACC	120	Prin of Financial Acct	
ARC	112	Construction Materials and Methods	
ARC	132	Specifications and Contracts	
BPR		Blueprint Reading/Const	
BUS	110	Introduction to Business	
BUS		Entrepreneurship I	
CMT	. — -	Codes and Inspections	
CMT		Prof Construction Superv	
CMT	212	Total Safety Performance	
CMT		Planning and Scheduling	
CMT		Costs and Productivity	
CMT	218	Human Relations Issues	
CMT		Applications Project	
CST		Planning/Estimating I	
CST		Planning/Estimating II	
SST	140	Green Building and Design Concepts	3
Major	Option		
COE	112	Co-op Work Experience I	2
COE		Co-op Work Experience II	1
Gradi	uation I	Requirements65Credits Hour	ſS

# 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.

ARC	112	Construction Materials and Methods	4
ARC	132	Specifications and Contracts	4
BPR	130	Blueprint Reading/Cost	3
CMT	210	Construction Management Fund	3
CMT	212	Total Safety Performance	3
CMT	218	Human Relations Issues	3
Comi	oletion	Requirements	16 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

COM	<b>ral Ed</b> เ 120	ucation Courses Interpersonal Communication		
ENG	110	Freshman Composition		
HUM	121	The Nature of America		
PHY	121	Applied Physics I4		
PSY	118	Interpersonal Psychology3		
Maio	Cours	ses		
HET	110	Diesel Engines6		
HET	114	Power Trains5		
HET	125	Preventative Maintenance2		
HET	134	Mechanical Fuel Injection3		
HET	231	Medium/Heavy Duty Brake System2		
HET	232	Medium/Heavy Duty Brake System Lab1		
HET	233	Suspension and Steering4		
HYD	134	Hydraulic/Hydrostatic Construction4		
PME	211	Advanced Equipment Repair4		
TRN	110	Intro to Transportation Tech		
TRN TRN	120 120A	Basic Transportation Electricity		
TRN	120A 140	Basic Transportation Electricity Lab		
TRN	170	PC Skills for Transportation		
IIXIN	170	1 6 Skills for Transportation2		
Major Electives 1				
Selec	t 6 hou	rs from the following courses		
Selec ELN	t 6 hou 110	rs from the following courses Survey of Electronics3		
Selec ELN ELN	t 6 hou 110 112	rs from the following courses Survey of Electronics		
Select ELN ELN ELN	t 6 hou 110 112 113	rs from the following courses Survey of Electronics		
Select ELN ELN ELN HET	t 6 hou 110 112 113 115	rs from the following courses Survey of Electronics		
Select ELN ELN ELN HET HET	t 6 hou 110 112 113 115 128	rs from the following courses Survey of Electronics		
Select ELN ELN ELN HET	t 6 hou 110 112 113 115	rs from the following courses Survey of Electronics		
Select ELN ELN ELN HET HET HET	t 6 hour 110 112 113 115 128 192	rs from the following courses Survey of Electronics		
Select ELN ELN ELN HET HET Major Select	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour	rs from the following courses  Survey of Electronics		
Select ELN ELN ELN HET HET HET Select HYD	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110	rs from the following courses  Survey of Electronics		
Select ELN ELN HET HET HET Select HYD HYD	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110 111	rs from the following courses  Survey of Electronics		
Select ELN ELN ELN HET HET HET Select HYD	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110	rs from the following courses  Survey of Electronics		
Select ELN ELN ELN HET HET HET Select HYD HYD HYD Major	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110 111 112	rs from the following courses  Survey of Electronics		
Select ELN ELN ELN HET HET HET Select HYD HYD HYD Select S	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110 111 112 • Electi t 2 hour	rs from the following courses  Survey of Electronics		
Select ELN ELN ELN HET HET HET Select HYD HYD Major Select COE	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110 111 112 • Electi t 2 hour 111	rs from the following courses  Survey of Electronics		
Select ELN ELN ELN HET HET HET Select HYD HYD HYD Select COE COE COE	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110 111 112 • Electi t 2 hour 111 112	rs from the following courses  Survey of Electronics		
Select ELN ELN ELN HET HET Major Select HYD HYD Major Select COE WLD	t 6 hour 110 112 113 115 128 192 • Electi t 2 hour 110 111 112 • Electi t 2 hour 111 112 111	rs from the following courses  Survey of Electronics		

# Diesel and Heavy Equipment Technology Diploma - D60460

ENG	110	Ication Courses Freshman Composition	3
PSY	118	Interpersonal Psychology	3
•	Cours	es Diesel Engines	e
		Power Trains	
		Preventative Maintenance	

HET HET	134 231	Mechanical Fuel Injection Medium/Heavy Duty Brake System	3
HET	232		
HYD	134	Medium/Heavy Duty Brake System Lab Hydraulic/Hydrostatic Construction	
TRN	110	Intro to Transportation Tech	
TRN	120		
TRN	120 120A	Basic Transportation Electricity	
TRN	120A 140		
	170	Transportation Climate Control	
TRN	170	PC Skills for Transportation	2
Major	Electiv	ves 1	
Select	t 2 hour	s from the following courses	
HYD	110	Hydraulics/Pneumatics I	3
HYD	111	Mobile Hydraulic Systems	3
HYD	112	Hydraulics/Medium/Heavy Duty	2
Major	Electiv	ves 2	
Select	t 4 hour	s 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	
Gradu	uation F	Requirements47 Credit I	

# 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

Internersonal Communications

**General Education Courses** 

COM 120

COIVI		interpersonal Communications	
ENG	110	Freshman Composition	3
HUM	121	The Nature of America	3
PHY	121	Applied Physics I	4
PSY	118	Interpersonal Psychology	3
Maior	Cours	es	
CIS		Basic PC Literacy	2
ELC	112	DC/AC Electricity	
ELC	113	Residential Wiring	
ELC	114	Commercial Wiring	
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	
ELC	128	Introduction to PLC	
ELC	129	Applications Project	2
ELC	134	Transformer Applications	2

Graduation Requirements65 Credit H			
ISC	112	Industrial Safety	2
		Industrial Electronics	
ELN	133	Digital Electronics	4

# 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.

. - .

ELC 134 ELN 229

Gener	ral Edu	cation Courses	
ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3
	_		
Major	Cours	es	
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

# Electrical Systems Technology Certificate – C35130

Graduation Requirements ...... 43 Credit Hours

Com	Completion Requirements12 Credit Hour				
ELC	119	NEC Calculations			
ELC	118	National Electrical Code			
ELC	114	Commercial Wiring			
		Residential Wiring			

# ELECTRONICS ENGINEERING TECHNOLOGY

The Electronics Engineering Technology curriculum prepares individuals to become technicians who design, build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, communication systems, and power electronic systems.

A broad-based core of courses, including basic electricity, solid-state fundamentals, digital concepts, and microprocessors, ensures the student will develop the skills necessary to perform entry-level tasks. Emphasis is placed on developing the student's ability to analyze and troubleshoot electronic systems.

Graduates should qualify for employment as engineering assistants or electronic technicians with job titles such as electronics engineering technician, field service technician, maintenance technician, electronic tester, electronic systems integrator, bench technician, and production control technician.

### **Electronics Engineering Technology Degree - A40200**

		ication Courses	
ENG		Expository Writing	3
ENG	114	Professional Research and Reporting	3
HUM		Technology and Society	3
MAT		Algebra and Trigonometry	
PSY	118	Interpersonal Psychology	3
	Electiv		
		rs from the following courses	
	139	AC Circuit Analysis	
ELN	231	Industrial Controls	3
Maio	r Electi	ves 2	
		rs from the following courses	
FIN	152	Fabrication Techniques	2
PCI	261	Process Measurement	3
Major	Electiv	ves 3	
		s from the following courses	
ATR	214	Advanced PLCs	
ATR	215	Sensors and Transducers	
COE	111	Co-op Work Experience I	
COE		Co-op Work Experience I	
ELN	236	Fiber Optics and Lasers	4
Major	Cours	oc.	
CSC	133	C Programming	3
EGR	115	Introduction to Technology	3
ELC	128	Intro to PLC's	3
ELC	131	Circuit Analysis I	
ELC	131A	Circuit Analysis I Lab	1
ELN	131	Analog Electronics I	4
ELN	132	Analog Electronics II	
ELN	133	Digital Electronics	
ELN	232	Introduction to Microprocessors	
ELN	233	Microprocessor Systems	
ELN	235	Data Communication Systems	
ELN	249	Digital Communication	
ELN	275	Troubleshooting	
PCI	170	DAQ and Control	4
Gradi	uation I	Requirements71 Credit Hour	

### 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.

Com	pletion	Requirements	.15 Credit Hours
		Troubleshooting	
		Digital Electronics	
		Analog Electronics I	
		Circuit Analysis I Lab	
ELC	131	Circuit Analysis I	4

### 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.

Com	pletio	n Requirements	13 Credit Hours
		Industrial Controls	
ELC	128	Intro to PLC's	3
ATR	215	Sensors and Transducers	3
ATR	214	Advanced PLCs	4

### **Microcomputer Programming Certificate -**C40200D

Completion Requirements			15 Credit Hours
		Algebra and Trigonometry	
ELN	133	Digital Electronics	4
ELN	131	Analog Electronics I	4
ELC	131	Circuit Analysis I	4

## **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** Intro to Interpersonal Communication ...... 3 COM 120 ENG 111 Expository Writing......3 **HUM 110** Technology and Society ...... 3 MAT 110 Mathematical Measurement ...... 3 Interpersonal Psychology ......3 **PSY 118 Major Electives** (Select 6.0 hours from the following courses) BPM 110 Bioprocess Practices......5 COE 111 Co-op Work Experience I ......2 COE 112 ENV 112 ENV 114

Site Assessment and Remediation......3

ENV 232

GIS	111	Introduction to GIS		GIS	230	GIS Data Creation	3
GIS	112	Introduction to GPS	3				
PTC	110	Industrial Environment	3	Majo	r Electi	ives 2	
				(Cho	ose 2 ci	redit hours from the following)	
Maior	Cours	es		CIV	250	Civil Engineering Tech Project	
BIO		General Biology I	4	COE	112	Co-op Work Experience I	2
CHM	131	Introduction to Chemistry	3				
CHM	131A	Introduction to Chemistry Lab		Majo	r Cours	ses	
CHM	132	Organic and Biochemistry		CEG	115	Intro to Tech and Sustainability	3
EGR	115	Introduction to Technology		CEG	151	CAD for Engineering Tech	3
ENV	110	Environmental Science		CEG	211	Hydrology and Erosion Control	3
ENV	110A	Environmental Science Lab	1	CEG	230	Subdivision Planning and Design	
ENV	120	Earth Science		CIV	125	Civil/Surveying CAD	3
ENV	193	Selected Topics		CIV	215	Highway Technology	3
	210	Management of Waste		GIS	111	Introduction to GIS	3
ENV	212	Instrumentation		GIS	112	Introduction to GPS	3
ENV	214	Water Quality		GIS	120	Intro to Geodesy	3
ENV	218	Environmental Health		GIS	121	Georeferencing and Mapping	3
ENV	220	Applied Ecology		SRV	110	Surveying I	4
ENV	226	Air Quality		SRV	111	Surveying II	4
	121	Environmental Health and Safety		SRV	210	Surveying III	4
		Requirements	72 Credit Hours	SRV	220	Surveying Law	3
0.00				SRV	240	Topo/Site Surveying	
	_			SRV	250	Advanced Surveying	4
Env	/iron	mental Education Certi	ficate -	SRV	260	Field and Office Practices	
C20	140	<b>\</b>		Grad	uation	Requirements75 Cre	dit Hours
CZU	140/	٦				•	

Major Cours	ses	
ENV 110	Environmental Science	3
ENV 110A	Environmental Science Lab	1
ENV 112	Environmental Education I	3
ENV 114	Environmental Education II	3
ENV 120	Earth Science	4
Graduation	Requirements	14 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 Ed	lucation 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
	tives 1 redit hours from the following) Project Management and Estimating	3

# 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

Gene	ral Edu	cation Courses	
COM	120	Intro to Interpersonal Communication	. 3
<b>ENG</b>	111	Expository Writing	. 3
HUM	110	Technology and Society	. 3
MAT	121	Algebra and Trigonometry	. 3
PHY	121	Applied Physics I	
PSY	118	Interpersonal Psychology	. 3
Major	Cours	es	
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.	
ISC 136	Productivity Analysis I	3
ISC 243	Production and Operations Managen	nent I 3
ISC 255	Engineering Economy	3
ISC 277	Quality Technology	
MEC 161	Manufacturing Processes I	3
MEC 180	Engineering Materials	3
Major Elect (Select 3.0 h	nours from the following courses)	
COE 111	Co-op Work Experience I	
COE 112		2
ISC 175	QA Fundamentals	
ISC 237	Quality Management	3
ISC 278	cGMP Quality Systems	
ISC 280	Validation Fundamentals	2
MAT 151	Statistics I	3
PTC 222	Pharmaceutical Process Control	
Graduation	Requirements	65 Cradit 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	
ISC	135	Principles of Industrial Management	4
ISC	243	Production and Operations Management I	3
ISC	255	Engineering Economy	3
		Requirements16 Credit	

### **Quality Assurance Certificate - C40240B**

The Quality Assurance Certificate provides the student with a progressive program that will support the development of basic technical skills and knowledge necessary for success in the industrial/manufacturing environment.

Comp	oletion	Requirements	14 Credit Hours
ISC	278	cGMP Quality System	2
ISC	175	QA Fundamentals	1
ISC	132	Manufacturing Quality Control	3
EGR	115	Introduction to Technology	3
DFT	151	CAD I	3
DFT	121	Introduction to GD and T	2

# 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 Control3
ISC	237	Quality Management3

oletio	n Requirements	12 Credit Hours
280	Validation Fundamentals	2
277	Quality Technology	4
	280	277 Quality Technology 280 Validation Fundamentals oletion Requirements

### **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				
<b>ENG</b>	111	Expository Writing3		
<b>ENG</b>	114	Professional Research and Reporting3		
HUM	110	Technology and Society3		
MAT	121	Algebra and Trigonometry3		
PSY	150	General Psychology3		
Major	Cours	es		
ARC	111	Introduction to Architectural Technology3		
ARC	112	Construction Materials and Methods4		
ARC	114	Architectural CAD2		
ARC	114A	Architectural CAD Lab1		
ARC	131	Building Codes3		
ARC	221	Architectural 3-D CAD3		
ARC	230	Environmental Systems4		
DES	125	Graphic Presentation I2		
DES	135	Principles & Elements of Design4		
DES	210	Business Practices for Interior Design2		
DES	220	Principles of Interior Design3		
DES	225	Textiles and Fabrics3		
DES	230	Residential Deign I3		
DES	235	Products3		
DES	240	Commercial and Contract Design3		
DES	255	History of Interior & Furnishings I		
DES	265	Lighting and Interior Design2		
DES	286	Interior Design/Advanced3		
Major	Electiv	/es		
Selec	t 2 hour	s from the following courses		
ARC		Advanced Architectural CAD2		
ARC	235	Architectural Portfolio3		
ARC	261	Solar Technology2		
ARC		Selected Topics2		
ARC		Digital Architecture2		
COE		Co-op Work Experience I1		
	112	Co-op Work Experience I2		
Gradi	uation I	Requirements 68 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

Gene	ral Edu	cation 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	Cours	es	
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	
CIV	125	Civil/ Surveying CAD	
ENV	110	Environmental Science	3
GIS	111	Introduction to GIS	
LAR	111	Intro to Landscape Architectural Tech	
LAR	112	Landscape Materials and Methods	
LAR	113	Residential Landscape Design	
LAR	120	Sustainable Development	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	
LAR	250	Survey of Landscape Architecture	
SRV	110	Surveying I	
Major	Electiv	ves	
Select	t 2 hour	rs from the following courses	
ARC		Architectural 3-D CAD	3
ARC	235	Architectural Portfolio	3
ARC	241	Contract Administration	2
COE	111	Co-op Work Experience I	1
COE	112	Co-op Work Experience I	
LAR	120	Sustainable Development	3
LAR	235	LAR Presentation Techniques	
LAR	241	Advanced Site Planning	3
LAR	242	Planning and Environment	3
Gradi	iation l	Requirements 70 Credit Hour	٠.

# Landscape Architecture Certificate - C40260A

Comp	oletion	Requirements16 Credit Hou	ırs
LAR	230	Principles of Horticulture I	4
LAR	113	Residential Landscape Design	3
LAR	112	Landscape Materials and Methods	4
LAR	111	Introduction to Landscape Architecture Technology.	3
ARC	114	Architecture CAD	2

# 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

Gene COM ENG HUM PHY PSY	120 110 110 121	Interpersonal Communications         3           Freshman Composition         3           Technology and Society         3           Applied Physics I         4           Interpersonal Psychology         3
•	Cours	es
ARC		Introduction to Architectural Technology3
DFT	111	Technical Drafting I2
DFT	112	Technical Drafting II2
DFT	121	Introduction to GD and T2
DFT	151	CAD I3
DFT	152	CAD II3
DFT	153	CAD III3
DFT	154	Intro to Solid Models/Rendering3
DFT	251	Customizing CAD Software3
DFT	253	CAD Data Management3
DFT	254	Intermediate Solid Model/Render3
<b>EGR</b>	115	Introduction to Technology
<b>EGR</b>	285	Design Project
ISC	121	Environmental Health and Safety3
ISC	135	Principles of Industrial Management4
MEC	130	Mechanisms3
MEC	161	Manufacturing Processes I3
MEC	180	Engineering Materials3
		Major Elective2
		•
Major	Electiv	ves
Selec	t 2 hour	rs from the following courses
COE	111	Co-op Work Experience I1
COE	112	Co-op Work Experience I2
DFT	119	Basic CAD2
		Requirements69 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.

Gener	al Educ	cation Courses	
ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	
Major	Course		
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	
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	
ISC	121	Environmental Health and Safety	3
ISC	135	Principles of Industrial Management	4
MEC	161	Manufacturing Processes I	3
	Elective		
Select	2 hours	from the following courses	
COE	111		1
COE	112	Co-op Work Experience I	2
DFT	119		
Gradu	ation R	equirements47 Credit I	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**

		Intro to Solid Models/Rendering  Requirements	
DET	454	Intro to Callel Madala/Dandarina	2
DFT	153	CAD III	3
DFT	152	CAD II	3
DFT	151	CAD I	3
DFT	111	Technical Drafting I	2

# 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 Edu	cation Courses	
ENG 111	Expository Writing	3
ENG 114	Professional Research and Reporting	
HUM 110	Technology and Society	
MAT 121	Algebra/Trigonometry I	
MAT 151	Statistics I	
PHY 131	Physics-Mechanics	
PSY 118	Interpersonal Psychology	
	Major Elective	
	·	
Major Cours		
DFT 121	Introduction to GD&T	
DFT 151	CAD I	
DFT 154	Intro Solid Modeling (ProE)	3
EGR 115	Introduction to Technology	
EGR 251	Statics	
EGR 252	Strength of Materials	
EGR 285	Design Project	2
ELC 128	Introduction to PLC	
ISC 128	Industrial Leadership	
ISC 132	Manufacturing Quality Control	3
ISC 255	Engineering Economy	
MEC 130	Mechanisms	
MEC 161	Manufacturing Processes I	
MEC 180	Manufacturing Materials	
MEC 265	Fluid Mechanics	
MEC 267	Thermal Systems	3
Major Electiv	ve	
	ours from the following courses)	
COE 111	Co-op Experience I	1
COE 112	Co-op Experience I	
DFT 152	CAD II	
DFT 153	CAD III	
DFT 254	Intermediate Solid Model/Render	
ELC 131	Circuit Analysis I	
	Requirements70 Credit Hou	s

### Mechanical Design Certificate - C40320B

Study of design elements for CAD users.

Select 2 hours from the following courses

### **CAD Electives**

DFT	119	Basic CAD (Micro Station)	2
DFT	152	CAD II	
Majo	Cour	ses	
DFT	151	CAD I	3
DFT	154	Intro Solid Modeling (ProE)	3
DFT	170		
MEC	180	Manufacturing Materials	3
		CAD Elective	2
Comp	oletion	Requirements	. 14 Credit Hours

### Thermal Mechanics Certificate - C40320C

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

DFT	170	Engineering Graphics (SolidWorks)	3	
MEC	180	Engineering Materials		
MEC	265	Fluid Mechanics		
MEC	267	Thermal Systems	3	
Completion Requirements12 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	
DFT	170	Engineering Graphics (SolidWorks)	3	
MEC	130	Mechanisms	3	
MEC	161	Manufacturing Processes I	3	
MEC	180	Engineering Materials	3	
Completion Requirements15 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
		Manufacturing Quality Control	
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

Gene	ral Edu	cation Courses	
ENG	110	Freshman Composition	3
PSY	118	Interpersonal Psychology	3
Major	Cours	as .	
•			
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

SST	140	Green Building	and Design Concepts3
Gradu	ation	Requirements	42 Credit Hours

# Introduction to Plumbing Certificate - C35300C

The Plumbing certificate curriculum is designed to give individuals the opportunity to acquire basic skills to assist with the installation and repairs of plumbing systems in residential and small buildings.

Course work includes interpretation of blueprints and practices in plumbing assembly. Students will be introduced to State Codes and requirements.

Graduates should qualify for entry-level employment at parts supply houses, maintenance companies, and plumbing contractors to assist with various plumbing applications.

CCITC	ai Luc	ication oodises	
PSY	118	Interpersonal Psychology	3
Maior	Cours	AS	
BPR	130	Print Reading/Construction	3
PLU	115	Basic Plumbing	4
D	4.40		
PLU	140	Introduction to Plumbing Codes	2
DIII	150	Plumbing Diagrams	2
FLU	150	Fluiribility Diagrams	
PHI	160	Plumbing Estimates	2
Comp	letion	Requirements	16 Credit Hours

# Plumbing Concepts I Certificate - C35300D

General Education Courses

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 Cours	es		
BPR 130	Blueprint Reading/Construction	3	
PLU 110a	Modern Plumbing Part 1	4	
PLU 110b	Modern Plumbing Part 2	5	
	Introduction to Plumbing Codes		
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.

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### 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 Diploma - D50420

#### **General Education Courses** 110 Freshman Composition ......3 MAT 110 Mathematical Measurement......3 **Major Courses** WLD 110 Cutting Processes ......2 SMAW (Stick) Plate.....5 WLD 115 SMAW (Stick) Plate/Pipe.....4 WLD 116 GMAW (MIG) FCAW/Plate.....4 WLD 121 WLD 122 GMAW (MIG) Plate ......3 WLD GTAW (TIG) Plate .....4 131 GTAW (TIG) Plate/Pipe......3 WLD 132 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 nonconsumable 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**

Completion Requirements			14 Credit Hours
WLD	141	Symbols and Specifications	3
WLD		GMAW (MIG) FCAW/Plate	
WLD	115	SMAW (Stick) Plate	5
WLD	110	Cutting Processes	2

## **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 <u>WebAdvisor</u> for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully <u>online</u>.

Program Names	Program Code
Accounting – AAS Degree	A25100
Accounting – <i>Diploma</i>	D25100
Accounting: Core – Certificate	C25100C
Income Tax Preparer – <i>Certificate</i>	C25100B
Payroll Accounting Clerk - Certificate	C25100A
Baking and Pastry Arts – AAS Degree	A55130
Baking and Pastry Arts – <i>Diploma</i>	D55130
Baking and Pastry Arts - Certificate	C55130A
Business Administration – AAS Degree	A25120
Business Core – <i>Certificate</i>	C25120D
Career Success - Certificate	C25120G
Customer Service – <i>Certificate</i>	C25120B
Entrepreneurship – <i>Certificate</i>	C25120C
International Marketing - Certificate	C25120M
Leadership - Certificate	C25120F
Sales Development - Certificate	C25120A
Business Administration/Human Resources Management – AAS Degree	A2512C
Business Administration/Human Resources Administration - Certificate	C2512CB
Business Administration/Human Resources Management: Core - Certificate	C2512CA
Business Analytics – AAS Degree	A25350
Business Intelligence – <i>Certificate</i>	C25350A
Business Analytics - Certificate	C25350B
Cosmetology – AAS Degree	A55140
Cosmetology - <i>Diploma</i>	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 – <i>Diploma</i>	D55150
Culinary Arts - Certificate	C55150A
Early Childhood Education – AAS Degree	A55220
Early Childhood Education – <i>Diploma</i>	D55220A
Early Childhood Education – <i>Certificate</i>	C55220D
Infant/Toddler Care/CDA - Certificate	C55220C
School-Age - Certificate	C55220E
Esthetics Technology - Certificate	C55230
Fire Protection Technology – AAS Degree	A55240
Fire Protection Technology: Basic – Certificate	C55240A
Loss Control/Investigation – Certificate	C55240B
Fire Management – Certificate	C55240C

## **BUSINESS & PUBLIC SERVICE TECHNOLOGIES**

Program Names Continued	Program Code
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 – <i>Diploma</i>	D25110
Entrepreneur – Certificate	C25110C
Event Management – Certificate	C25110A
Hotel Management – Certificate	C25110B
Restaurant Management - Certificate	C25110D
Lateral Entry - Certificate	C55430

### \*Collaborative Agreements

None at this time

## **BUSINESS & PUBLIC SERVICES TECHNOLOGIES**

### **ACCOUNTING**

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

In addition to course work in accounting principles, theories, and practice, students will study business law, finance, management, and economics. Related skills are developed through the study of communications, computer applications, financial analysis, critical thinking skills, and ethics.

Graduates should qualify for entry-level accounting positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems, and governmental agencies. With work experience and additional education, an individual may advance in the accounting profession.

### **Accounting Degree - A25100**

-Day, Evening, and Online

_			
Gene	ral Edu	cation Courses	
ACC	220	Professional Transition	1
<b>ENG</b>	111	Expository Writing	3
<b>ENG</b>	114	Professional Research and Reporting	3
PSY	150	General Psychology	3
		Humanities/Fine Arts Elective	
		Mathematics Elective	
		Wathernado Elective	
Maio	Cours	205	
ACC	120	Principles of Financial Accounting	Δ
ACC	121	Principles of Managerial Accounting	7
ACC	129	Individual Income Taxes	
ACC	130	Business Income Taxes	
ACC	140	Payroll Accounting	
ACC	149	Intro to Acc Spreadsheets	
ACC	150	Accounting Software Applications	
ACC	215	Ethics in Accounting	3
ACC	220	Intermediate Accounting I	
ACC	221	Intermediate Accounting II	
BUS	115	Business Law I	
CIS	111	Basic PC Literacy	
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	
Maio	Electi	ve List I	
		rs from the following courses:	
BUS		Business Math	3
BUS		Personal Finance	
БОО	120	1 CISCIIII I IIIIIICC	
Major	Flocti	ve List II	
•		rs from the following courses:	
	122	Principles of Financial Accounting II	2
		NC Business Taxes	
ACC	132		
ACC	151	Acct Spreadsheet Appl	2
ACC	152	Advanced Software Applications	
ACC	225	Cost Accounting	
ACC	227	Practices in Accounting	3
ACC	240	Gov & Not-for-Profit Acct	3
ACC	268	Information Systems and Internal Controls	
ACC	269	Auditing and Assurance Services	
BUS	116	Business Law II	3

Graduation	Requirements	68 Credit Hours
COE 121	Co-op Work Experience II	1
COE 112	Co-op Work Experience I	2
BUS 225	Business Finance	3

### 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 Ed	ucation Courses	
ENG 111	Expository Writing	3
PSY 150	General Psychology	3
	•	
Major Cour	ses	
ACC 120	Principles of Financial Accounting	4
ACC 121	Principles of Managerial Accounting	
ACC 129	Individual Income Taxes	
ACC 140	Payroll Accounting	
ACC 149	Intro to Accounting Spreadsheets	
ACC 150	Accounting Software Applications	
BUS 115	Business Law I	
BUS 121	Business Math	
CIS 111	Basic PC Literacy	
	Electives	
Select a mir	nimum of 5 credit hours from the following courses:	
ACC 122	Principles of Financial Accounting II	3
ACC 132	NC Business Taxes	
ACC 152	Advanced Software Applications	
ACC 215	Ethics in Accounting	3
ACC 240	Govt. and Not-for-Profit Accounting	
ACC 268	Information Sys & Internal Control	
BUS 125	Personal Finance	
COE 112	Co-Op Work Experience	
COE 121	Co-Op Work Experience	
JUL 121	CO OF THEM EXPONENCE	

### **Accounting Core Certificate - C25100C**

Graduation Requirements ......36 Credit Hours

-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
ΩP			

## **BUSINESS & PUBLIC SERVICES TECHNOLOGIES**

ECO 25	2 Principles of Macr	oeconomics 3
ENG 11	1 Expository Writing	3
		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.

Gradua	tion R	equirements	15 Credit Hours
CIS 1	11	Basic PC Literacy	2
BUS 1	15 I	Business Law I	3
ACC 1	30 I	Business Income Taxes	3
ACC 1	29	Individual Income Taxes	3
ACC 1	20 I	Principles of Financial Accounting	4

# 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.

Grad	uatior	n Requirements 12 Cred	dit Hours
CIS	111	Basic PC Literacy	2
ACC	150	Accounting Software Applications	2
ACC	149	Introduction to Accounting Spreadsheets	2
ACC	140	Payroll Accounting	2
ACC	120	Principles of Financial Accounting	4

## **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**

<b>ENG</b>	111	Expository Writing	. 3
<b>ENG</b>	112	Argument-Based Research	. 3
		Mathematical Models	
		Humanities/Fine Arts Elective	. 3
		Social/Behavioral Science Elective	. 3

### **Major Courses**

BPA	120	Petit Fours & Pastries	3
BPA	130	European Cakes & Tortes	
BPA	150	Artisan & Specialty Breads	4
BPA	165	Hot and Cold Desserts	3
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	
BPA	250	Dessert & Bread Production	5
BPA	260	Pastry & Baking Marketing	3
COE	112	Co-op Work Experience I	2
CUL	110	Sanitation and Safety	
CUL	112	Nutrition for Foodservice	
CUL	140	Culinary Skills I	
CUL	160	Baking I	3
CUL	170	Garde-Manger I	3
HRM	245	Human Resources Management Hosp	
Graduation Requirements71 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.

Mathematical Models......3

## General Education Courses ENG 111 Expository Writing......3

MAT 115

Major Courses					
BPA	120	Petit Fours & Pastries	3		
BPA	130	European Cakes & Tortes			
BPA	150	Artisan & Specialty Breads			
BPA	165	Hot and Cold Desserts			
BPA	210	Cake Design & Decorating	3		
BPA	220	Confection Artistry			
BPA	230	Chocolate Artistry	3		
BPA	230A	Chocolate Artistry Lab	1		
BPA	240	Plated Desserts			
BPA	250	Dessert & Bread Production	5		
CUL	110	Sanitation and Safety	2		
CUL	112	Nutrition for Foodservice			
CUL	140	Culinary Skills I	5		
CUL	160	Baking I			
HRM	245	Human Resources Management Hosp			

Graduation Requirements ......40 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

## **BUSINESS & PUBLIC SERVICES TECHNOLOGIES**

baking skills. The majority of class is devoted to actual hands-on baking skill development.

CUL		Sanitation and Safety				
CUL	140	Basic Culinary Skills				
CUL	160	Baking I	3			
	A minimum of 6 Credit Hours from the following:					
BPA	150	Artisan & Specialty Bread	4			
BPA	165	Hot and Cold Desserts	3			
BPA	210	Cakes Design & Decorating	3			
Com	Completion Requirements16 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

Gene	ral Edu	ucation Courses	
ENG	111	Expository Writing	3
ENG OR	112	Argument-Based Research	3
ENG	114	Professional Research and Reporting	3
		Mathematic/Science Elective	3
		Social Sciences Elective	3
		Humanities/Fine Arts Elective	
•	Cours		
	120	Principles of Financial Accounting	
ACC OR	121	Principles of Managerial Accounting	4
BUS	225	Business Finance	3
BUS	110	Introduction to Business	3
BUS	115	Business Law I	3
BUS OR	116	Business Law II	3
BUS	217	Employment Law and Regulations	3
BUS	121	Business Math	
BUS	137	Principles of Management	
BUS	139	Entrepreneurship I	
BUS	153	Human Resources Management	3
CIS	110	Introduction to Computers	3
INT	110	International Business	
MKT		Principles of Marketing	
MKT	221	Consumer Behavior	
MKT		International Marketing	
IVIIXI	224	Economics Elective	
		Major Elective	
Maio	r Electi	,	
•		courses from the following	
BUS	125	Personal Finance	3
BUS		Survey of Real Estate	

BUS	151	People Skills	3
BUS	234	Training and Development	3
BUS	245	Entrepreneurship II	3
BUS	260	Business Communications	
BUS	280	REAL Small Business	4
COE	111	Co-op Work Experience I	1
LOG	110	Introduction to Logistics	
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/Researc	h2
OST	184	Records Management	3
Completion Requirements64 Credit Hours			

# **Business Administration: Business Core Certificate - C25120D**

-Day, Evening, and Online

This program is designed for students seeking specialized training to prepare for employment or to enhance their skills in the fields of Business Management, Accounting, Economics, and Law. These certificate courses can be applied toward the Business Administration A.A.S. or the Business Administration/Human Resources A.A.S. degree which will help prepare students for careers in all facets of business. Upon completion, students will have a fundamental knowledge of the core business functions and processes for employment in small business or industry as well as help improve their earning potential.

Major Courses				
ACC 1	120	Principles of Financial Accounting	4	
BUS 1		Introduction to Business		
BUS 1	115	Business Law I	3	
BUS 1	137	Principles of Management	3	
ECO 1	151	Survey of Economics	3	
OR		•		
ECO 2	251	Principles of Microeconomics	3	
OR				
ECO 2	252	Principles of Macroeconomics	3	
Completion Requirements16 Credit Hours				

# Career Success Certificate - C25120G -Online

The Career Success Certificate is designed to help students develop the critical "employability" skills that sit at the top of every employer's job requirements list. By completing these courses, students in any curriculum education program, or students enrolling in the certificate as a stand-alone, will learn the importance of communication skills, problem solving skills, and interpersonal skills, as well as gain knowledge in the fundamental requirements for organization success and personal financial responsibility.

Majo	r Cour	ses	
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
Com	oletion	Requirements	13 Credit Hours

# Customer Service Certificate - C25120B -Day

This certificate program is designed to equip the student with a specialized skill set for immediate employment in the field of

customer service or to upgrade their customer service skills for job advancement in the service sector, industry or small business.

# 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 certificate enables students to recognize business opportunities and develop a business plan for the purpose of securing financing for a business start-up as well as to understand how to effectively operate a small business. Students will learn practical skills and some of the best business practices in establishing and operating a business.

#### 

Completion Requirements ...... 12 Credit Hours

## International Marketing Certificate – C25120M – Day

International Marketing is a certificate that is imbedded in the Business Administration curriculum. The International Marketing Certificate introduces innovative marketing concepts, focusing on entrepreneurship combined with the marketing skills necessary for today's highly competitive and international environment. This class puts a heavy emphasis on learning many cultures and ways they market to their home country. 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	· Cours	es	
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
		Requirements	

#### Leadership Certificate - C25120F

-Day, Evening, and Online

This certificate program is designed to equip the student with a specialized leadership skill set for immediate employment or to upgrade their leadership skills, which includes a focus on management and communication skills, for job advancement.

Major Cour	ses	
BUS 137	Principles of Management	3
BUS 151 OR	People Skills	3
MKT 223	Customer Service Skills	3
BUS 153	Human Resources Management	3

Comp	letion	Requirements	12 Credit Hours
HUM	115	Critical Thinking	3
OR	204	Training and Development	
RHS	234	Training and Development	3

#### Sales Development Certificate - C25120A

- Day & Evening

This certificate program is designed to equip the student with specialized sales skill set for immediate employment or to develop their sales skills for job advancement in small business or industry.

Major	Cou	rses	•
BUS	121	Business Mathematics	3
<b>ENG</b>	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
Comp	oletio	n 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**

		ng, and Online Ication Courses	
		Expository Writing	3
	112	Argument-Based Research	3
ENG	114	Professional Research and Reporting	3
		Mathematic/Science Elective	
		Psychology/Sociology Elective	3
		Humanities/Fine Arts Elective	
Majoı	Cours	es	
ACC	120	Principles of Financial Accounting	4
ACC OR	121	Principles of Managerial Accounting	4
BUS	225	Business Finance	3
BUS	110	Introduction to Business	
BUS	115	Business Law I	3
BUS	121	Business Math	3
BUS	137	Principles of Management	3
BUS	153	Human Resources Management	
*BUS	217	Employment Law and Regulations	3

*BUS 234	Training and Development	. 3	BUS 256	Recruitment, Selection, and Personnel Planning 3
*BUS 256	Recruitment, Selection, and Personnel Planning		BUS 258	Compensation and Benefits
*BUS 258	Compensation and Benefits	. 3	Completion	Requirements15 Credit Hours
BUS 259	HRM Applications		•	•
CIS 110	Introduction to Computers		D	VECO ANIAL VEIGO
MKT 120	Principles of Marketing		ROSII	NESS ANALYTICS
	Economics Elective		The Busine	ss Analytics curriculum is designed to provide students
	Major Elective	. 6		owledge and the skills necessary for employment and
*Non-waive	rable pre-requisites for BUS 259 HRM Applications	•	growth in ar	nalytical professions. Business analysts process and sential information about business operations and also
Major Electi	ve			lata for forecasting purposes.
Select one c	ourse from the following			ata ioi ioioodottiig pai poodo.
BUS 125	Personal Finance		Students wi	Il complete course work in business analytics,
BUS 139	Entrepreneurship I			eneral theory, best practices, data mining, data
BUS 148	Survey of Real Estate		warehousin	g, predictive modeling, project and operations
BUS 151	People Skills	. 3		nt, statistical analysis, and software packages. Related
BUS 260	Business Communications		skills include	e business communication, critical thinking and
COE 111	Co-op Work Experience I		decision ma	aking.
INT 110	International Business			
MKT 223	Customer Service		Graduates s	should qualify for employment as data technicians,
MKT 224	International Marketing		data scienti:	sts, business and data analytics engineers, and
OST 136	Word Processing	. 3	business ar	nalysts in the fields of finance, banking, logistics,
OST 137 OST 140	Office Software Applications		marketing, I	healthcare, manufacturing, information technology, and
OST 184	Records Management		_	t organizations.
	Requirements64 Credit Hour	. J re	3	g
Graduation	Nequirements04 Great riour	3	Duoine	no Analytica Degree ACECEO
D	a Administration/House			ss Analytics Degree - A25350
	ss Administration/Human		-Day	
Resource	ces Administration Certificate -			
C2512C				ucation Courses
			ENG 111	Expository Writing
-Day and On	line		ENG 114	Prof Research and Reporting3
This			MAT161/A	College Algebra4
	te program is designed to equip the student with a		MAT 151/A	Statistics I
	Human Resources Administration skill set for immediate or to upgrade the student's skills for job advancement		HUM 115 ECO 251	Critical Thinking
	n Resources Administration field.		ECO 231	Prin of Microeconomics
iii tiic i idiiia	Tresources Administration field.		Major Cour	202
Major Cours	ses		BAS 120	Business Analytics I
BUS 151	People Skills	3	BAS 121	Analytics Methods I
OR			BAS 150	Analytics Tools I
MKT 223	Customer Service	.3	BAS 220	Business Analytics II
BUS 153	Human Resources Management		BAS 221	Analytics Methods II
BUS 234	Training and Development		BAS 230	Business Analytics III
OR			BAS 250	Analytics Tools II
BUS 256	Recruitment, Selection, and Planning	.3	BAS 270	Analytics Practicum3
OR	•		BUS 110	Introduction to Business3
BUS 258	Compensation and Benefits	.3	CIS 110	Introduction to Computers3
OST 136	Word Processing	.3	CTS 130	Spreadsheet3
OR			DBA 110	Database Concepts3
OST 137	Office Software Applications	.3	DBA 115	Database Applications3
OST 184	Records Management			
Completion	Requirements15 Credit Hour	rs	Major Elect	
				urs from the following courses:
Rucinos	ss Administration/Human		ACC 120	Prin of Financial Acct4
			BUS 210	Investment Analysis
Resource	ces Management Certificate-		BUS 225	Business Finance
C2512C	<u> </u>		LOG 110	Introduction to Logistics
			LOG 215	Supply Chain Management
-Day and C	mine		LOG 225	Logistics Systems 4
This coult	to program is decimand to garde the attribute of		MKT 120 MKT 221	Principles of Marketing
	te program is designed to equip the student with a		WEB 110	Internet/Web Fundamentals3
	Human Resources Management skill set for immediate	;	WEB 110	Web Development Tools
	or to upgrade their skills for job advancement in the ources Management area.		WEB 250	Database Driven Websites
i lui ilaii Nesi	ourses management area.			n Requirements65 Credit Hours

Human Resource Management.....3

Major Courses BUS 153 Hu

BUS 217 BUS 234

## Business Intelligence Certificate - C25350A

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

#### **Major Courses**

Comi	oletion	Requirements	12 Credit Hours
BAS	220	Business Analytics II	3
		Analytics Tools I	
BAS	121	Analytics Methods I	3
BAS	120	Business Analytics I	3

#### **Business Analyst Certificate - C25350B**

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

#### **Major Courses**

Comp	Completion Requirements12 Credit Hours				
BAS	270	Analytics Practicum	3		
BAS	250	Analytics Tools II	3		
BAS	230	Business Analytics III	3		
		Analytics Methods II			

#### COSMETOLOGY

The Cosmetology curriculum is designed to provide competencybased knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multicultural practices, business/computer principles, product knowledge, and other selected topics.

Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and related businesses.

#### Cosmetology Degree - A55140

-Day

FNG 110

#### 

HUM	110	Technology and Society	3
MAT	110	Mathematical Measurement	
PSY	118	Interpersonal Psychology	3
		, , ,	
Major	Course	es	
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		Contemporary Design	2
Gradu	ıation F	Requirements6	4 Credit Hours

Freshman Composition ...... 3

#### Cosmetology Diploma - D55140A

-Day

The Cosmetology curriculum is designed to provide competencybased knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multicultural practices, business/computer principles, product knowledge, and other selected topics.

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**

Graduation	Requirements	47 Credit Hours
COS 118	Salon IV	7
COS 117	Cosmetology Concepts IV	2
COS 116	Salon III	4
COS 115	Cosmetology Concepts III	4
COS 114	Salon II	8
COS 113	Cosmetology Concepts II	4
COS 112	Salon I	8
COS 111	Cosmetology Concepts I	4
Major Cours	ses	
PSY 118	Interpersonal Psychology	
ENG 110	Freshman Composition	

## 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	Expository Writing	3
		Prof Research and Reporting	
		Critical Thinking	
		Social Problems	

iviajoi	Major Courses					
ACA		Professional Transition				
CJC	111	Intro to Criminal Justice	3			
CJC	112	Criminology	3			
CJC	113	Juvenile Justice				
CJC	121	Law Enforcement Operations	3			
CJC	131	Criminal Law	3			
CJC	132	Court Procedure and Evidence	3			
CJC	212	Ethics and Community Relations	3			
CJC	213	Substance Abuse	3			
CJC	215	Organization and Administration	3			
CJC	221	Investigative Principles	4			
CJC	222	Criminalistics				
CJC	231	Constitutional Law	3			
CJC	232	Civil Liability	3			
		Major Elective	9			
	r Electi					
Selec	t 9 hou	rs from the following courses				
CJC	122	Community Policing	3			
CJC	141	Corrections				
CJC	151	Intro to Loss Prevention				
CJC	160	Terrorism: Underlying Issues	3			
CJC	161	Intro to Homeland Security	3			
CJC	162	Intel Analysis & Security Management	3			
CJC	163	Transportation & Border Security	3			
CJC	214	Victimology	3			
CJC	223	Organized Crime	3			
CJC	225	Crisis Intervention				
	233	Correctional Law				
CJC	241	Community-Based Corrections	3			
CJC		Treat Assessment				
CJC		High-Risk Event Planning	2			
Grad	uation	Requirements 65 Credit Hou	ırs			

## 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**

Grad	Graduation Requirements 15 Credit Hour		
		Community-Based Corrections	
CJC	233	Correctional Law	3
CJC	141	Corrections	3
CJC	113	Juvenile Justice	3
CJC	111	Intro to Criminal Justice	3

## 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	
		Criminalistics		
CJC	245	Friction Ridge Analysis	3	
CJC	246	Advanced Friction Ridge Analysis	3	
Grad	Graduation Requirements16			

### 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.

Expository Writing......3

Prof Research and Reporting......3

#### Latent Evidence Degree - A5518A

-Day Only

**ENG 111** 

**ENG 114** 

#### 

HUM	115	Critical Ininking	3
SOC	220	Social Problems	3
Majo	r Cour	ses	
CJČ	111	Introduction to Criminal Justice	3
CJC	112	Criminology	
CJC	113	Juvenile Justice	3
CJC	121	Law Enforcement Operations	3
CJC	131	Criminal Law	
CJC	132	Court Procedure & Evidence	3
CJC	144	Crime Scene Processing	3
CJC	146	Trace Evidence	
CJC	212	Ethics and Community Relations	
CJC	213	Substance Abuse	
CJC	221	Investigative Principles	4
CJC	222	Criminalistics	
CJC	231	Constitutional Law	
CJC	245	Friction Ridge Analysis	3
CJC	246	Advanced Friction Ridge Analysis	
SPA	120	Spanish for the Workplace	
Grad	uation	Poquiromonte	

#### **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

Gene	ral Edu	cation Courses	
ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
MAT	115	Mathematical Models	3
		Humanities/Fine Arts Elective	3
		Social/Behavioral Science Elective	3
Major	Cours	es	
COE	112	Co-op Work Experience I	2
CUL	110	Sanitation and Safety	2
CUL	112	Nutrition for Food Service	
CUL OR	130	Menu Design	2
CUL	214	Wine Appreciation	2
CUL	135	Food and Beverage Service	
CUL	135A	Food and Beverage Service Lab	
CUL	140	Culinary Skills I	
CUL	160	Baking I	
CUL	170	Garde-Manger I	
CUL	230	Global Cuisines	
CUL	240	Culinary Skills II	
CUL	250	Classical Cuisine	
HRM		Food and Beverage Control	
HRM		Human Resources Management Hosp	
HRM		Procurement for Hospitality	3
SPA	120	Spanish for the Workplace	
Maia	Electi	·	
Solor	t a min	nimum of 7 credit hours from the following:	
BPA	150	Artisan Breads	4
OR	100	7 Tilodii Bicado	•
BPA	210	Cake Design & Decorating	3
OR		gg	
CUL	214	Wine Appreciation	2
OR		- PP	
CUL	260	Baking II	3
OR		<b>C</b>	
CUL	270	Garde-Manger II	3
OR			
COE	122	Co-op Work Experience II	
Gradi	uation I	Requirements72 Credit Hour	s

#### **Culinary Arts Diploma- D55150**

-Day Only

CUL 240

HRM 245

General Education Courses

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 Eu	General Education Courses				
ENG 111	Expository Writing	3			
MAT 115	Mathematical Models	3			
Major Cours	ses				
CUL 110	Sanitation and Safety	2			
CUL 140	Culinary Skills I	5			
CUL 160	Baking I	3			
CUL 170	Garde-Manger I	3			

Select a minimum of 6 credit hours from the following:				
CUL 112	Nutrition for Foodservice	3		
HRM 220	Food & Beverage Cost Control	3		
HRM 260	Procurement for Hospitality	3		

Culinary Skills II ......5

Human Resources Management Hosp ......3

		Garde Manger II 43 Credit	
		Baking II	
CUL	130	Menu Design	2
BPA	210	Cake Design & Decorating	3
BPA	150	Artisan Breads	4
		nimum of 10 credit hours from the following:	
I II XIVI	200	r rocarement for riospitality	

#### 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	· Cours	es	
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
Comp	oletion	Requirements18 Credit Hou	rs

#### 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

Gene	ral Edu	cation Courses	
<b>ENG</b>	111	Expository Writing	3
<b>ENG</b>	112	Argument-Based Research	
MAT	140/A		
SOC	210	Introduction to Sociology	3
HUM	115	Critical Thinking	3
OR			
REL	110	World Religions	3
Maio	Cours	es	
EDU		Introduction to Early Childhood Education	4
EDU	131	Child, Family, and Community	
EDU	144	Child Development I	
EDU	145	Child Development II	
EDU	146	Child Guidance	
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	
EDU	251/A		4
EDU	261	Early Childhood Administration I	
EDU	262	Early Childhood Administration II	3
OR		•	
EDU	287	Leadership/Early Child Education	3
OR			
EDU	114	Intro to Family Childcare	3
EDU	271	Educational Technology	3
EDU	280	Language and Literacy Experiences	3
EDU	282	Early Childhood Literature	3
EDU		Early Child Capstone Prac	4
Grad	uation I	Requirements72 Credit Ho	urs

#### 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
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ENG	111	Expository Writing	3
ENG	112	Argument-Based Research	3
SOC	210	Introduction to Sociology	3
	_		
Major	Cour	ses	
EDU	119	Introduction to Early Childhood Educ	cation 4
EDU	131	Child, Family, and Community	3
EDU	144	Child Development I	3
EDU	145	Child Development II	
EDU	146	Child Guidance	3
EDU	151	Creative Activities	3
EDU	153	Health, Safety, and Nutrition	
EDU	157	Active Play	3
EDU	184	Early Child Intro Pract	2
EDU	234	Infants, Toddlers, & Twos	3
Gradu	ation	Requirements	39 Credit Hours

#### ECE Certificate - C55220D

-Day, Evening, Online

#### **Major Courses**

Gradu	Graduation Requirements 18 Credit Hours			
EDU	184	Early Child Intro Practicum	2	
EDU	153	Health, Safety, and Nutrition	3	
EDU	146	Child Guidance	3	
EDU	145	Child Development II	3	
EDU	131	Child, Family, and Community	3	
EDU	119	Intro to Early Childhood Education	on4	

#### School-Age Certificate - C55220E

-Day, Evening, Online

#### **Major Courses**

Grad	uation	Requirements	18 Credit Hours
EDU	263	School-Age Program Admin	2
EDU	235	School-Age Dev and Program	3
EDU	163	Classroom Mgmt and Instruction	3
EDU	145	Child Development II	3
EDU	131	Child, Family, and Community	3
EDŪ	119	Intro to Early Childhood Education.	4

#### Infant/Toddler Care/CDA Certificate -C55290

-Day, Evening, Online

The Infant/Toddler/CDA Certificate is designed to provide only the educational component required for CDA eligibility. Students enrolled in EDU 184 do not automatically receive the CDA credential.

#### **Major Courses**

EDU	184	Early Childhood Intro Practicum	2
			_
EDU	153	Health, Safety, and Nutrition	3
EDU	144	Child Development I	3
EDU	131	Child, Family, and Community	3
EDŪ	119	Introduction to Early Childhood Educati	on 4

#### **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		
Comp	Completion Requirements16 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

#### 

-140	1 1 7	Troicesional rescaron a reporting	
HUM	115	Critical Thinking	3
HUM	230	Leadership Development	3
MAT	115	Mathematical Models	
OR			
MAT	140/A	Survey of Mathematics	4
OR			
MAT	161/A	College Algebra	
SOC	220	Social Problems	3
•	Cours		
FIP	120	Intro to Fire Protection	3
FIP	124	Fire Prevention & Public Ed	
FIP	128	Detection & Investigation	3
FIP	132	Building Construction	3
FIP	152	Fire Protection Law	
FIP	176	HazMat Operations	4
FIP	220	Fire Fighting Strategies	3
FIP	221	Adv Fire Fighting Strategies	
FIP	229	Fire Dynamics and Combust	3
FIP	236	Emergency Management	
FIP	240	Fire Service Supervision	3

FIP FIP FIP	244 248 276	Fire Protection Project	3	
Majo	r Electi	ves		
Selec	t 6 cred	it hours from the following list of courses:		
FIP	136	Inspection and Codes	3	
FIP	144	Sprinklers & Auto Alarms	3	
FIP	164	OSHA Standards		
FIP	228	Local Govt Finance	3	
FIP	256	Munic Public Relations	3	
Other Required Courses  ACA Professional Transition				
oradadion requiremente illinininininininini oo oreak nodra				

## 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**

Grad	luation	Requirements 15 Cr	edit Hours
FIP	229	Fire Dynamics and Combust	3
FIP	220	Firefighting Strategies	3
FIP	132	Building Construction	3
FIP	124	Fire Prevention and Public Education	3
FIP	120	Introduction to Fire Protection	3

## 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**

Graduation Requirements15 Credit Hours				
FIP	248	Fire Service Personnel Administration	3	
FIP	152	Fire Protection Law	3	
FIP	128	Detection and Investigation	3	
FIP	124	Fire Prevention and Public Education	3	
ENG	111	Expository Writing		

#### 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**

Graduation Requirements 15 Credit Hours				
FJP	276	Managing Fire Services	. 3	
FIP	248	Fire Service Personnel Administration	. 3	
FIP	240	Fire Service Supervision	. 3	
FIP	152	Fire Protection Law	. 3	
ENG	111	Expository Writing	. 3	

#### **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
OR			
ECO	252	Principles of Macroeconomics	3
<b>ENG</b>	111	Expository Writing	3
<b>ENG</b>	112	Argument-Based Research	3
OR		•	
<b>ENG</b>	114	Professional Research and Reporting	3
MAT	121	Algebra/Trigonometry I	3
OR			
MAT	161/A	College Algebra	4
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**

Graduation	Requirements 66	Credit Hours
MKT 120	Principles of Marketing	
LOG 245	Logistics Security	(
CTS 130	Spreadsheet	(
COE 113	Co-op Work Experience II	(
COE 112	Co-op Work Experience I	
COE 111	Co-op Work Experience I	
BUS 153	Human Resources Management	(
ACC 121	Principles of Managerial Accounting	4
Select 6 cre	dit hours from the following list of courses:	

#### Global Logistics Technology: Basic Certificate - C25170A

-Online

#### **Major Courses**

Graduation	Requirements	12 Credit Hours
	Import/Export Management	
LOG 215	Supply Chain Management	3
LOG 125	Transportation Logistics	3
LOG 110	Introduction to Logistics	3

#### **Distribution Management Certificate -**C25170B

- Online

#### **Major Courses**

Graduatio	n Requirements	16 Credit Hours
LOG 225	Logistics Systems	4
LOG 215	Supply Chain Management	3
LOG 211	Distribution Management	3
LOG 125	Transportation Logistics	3
LOG 110	Introduction to Logistics	3

#### 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 entrylevel 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**

<b>ENG</b>	111	Expository Writing	.3
<b>ENG</b>	112	Argument-Based Research	.3
OR			
<b>ENG</b>	114	Prof Research and Reporting	. 3
MAT	115	Mathematical Models	.3
		Humanities/Fine Arts Elective	.3
		Social/Behavioral Science Elective	. 3
Majo	Cours	es	
ACC	175	Hotel and Restaurant Accounting	.4
BUS	139	Entrepreneurship I	.3
OR		·	
HRM	210	Meetings & Event Planning	.3

COE	112	Co-op Work Experience I	2
CUL	110	Sanitation and Safety	2
CUL	130	Menu Design	2
OR		· ·	
HRM	225	Beverage Management	3
CUL	135	Food and Beverage Service	
CUL	135A	Food and Beverage Service Lab	
CUL	142	Fundamentals of Food	
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
Gradi	uation	Requirements 68 Cre	

## Hospitality Management Diploma - D25110

-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 Edu	ucation Courses
ENG 111	Expository Writing
MAT 115	Mathematical Models
Major Cours	
CUL 110	Sanitation and Safety2
BUS 139	Entrepreneurship I
OR	
CUL 214	Wine Appreciation2
OR	• •
HRM 225	Beverage Management3
HRM 110	Hosp & Tourism 3
HRM 140	Legal Issues—Hospitality
HRM 220	Cost Control—Food & Beverage
HRM 240	Marketing for Hospitality3
HRM 245	Human Resources Management Hosp3
	· · · · · · · · · · · · · · · · · · ·
Select a mir	nimum of 8 credit hours from the following:
ACC 175	Hotel & Restaurant Accounting4
CUL 130	Menu Design
CUL 135	Food & Beverage Service
CUL 135A	Food & Beverage Service Lab1
CUL 142	Fundamentals of Food5
HRM 260	Procurement for Hospitality3
	, ,
Select a mir	nimum of 8 credit hours from the following:
COE 112	Co-Op Work Experience
CUL 214	Wine Appreciation2
HRM 120	Front Office Procedures
HRM 210	Meetings & Event Planning
SPA 120	Spanish for the Workplace
Graduation	Requirements 41 Credit Hours

## **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 CUL HRM HRM	110	es Sanitation and Safety Introduction to Hosp & Tourism Meetings & Event Planner	3
Selec	t a min	imum of 7 credit hours from the foll	lowing:
CUL	130	Menu Design	2
CUL	135	Food & Beverage Service	2
CUL	135A	Food & Beverage Service Lab	1
HRM	140	Legal Issues - Hospitality	
HRM	220	Cost Control - Food & Beverage	
HRM	240	Marketing for Hospitality	
HRM	260	Procurement for Hospitality	3
Comp	oletion	Requirements	

## 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 Introduction to Hospitality & Tourism......3 HRM 110 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 Marketing for Hospitality......3 HRM 240 HRM 260 Procurement for Hospitality ......3

Graduation Requirements ......15 Credit Hours

## 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.

Human Resources Management Hosp......3

#### 

HRM 245

Selec	t a min	imum of 4 credit hours from the following:	
ACC	175	Hotel and Restaurant Accounting	4
CUL	135	Food and Beverage Service	2
		Food and Beverage Service Lab	
HRM	140	Legal Issues—Hospitality	3
HRM	240	Marketing for Hospitality	3
SPA	120	Spanish for the Workplace	3
Comi	oletion	Requirements15 Credit I	lours

#### **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**

110	Sanitation and Safety2	2
110	Introduction to Hospitality & Tourism	3
135	Food & Beverage Service	2
135A	Food & Beverage Service Lab	1
215	Restaurant Management	3
245	Human Resources Management Hosp	
	•	
t a min	imum of 4 credit hours from the following:	
t a min 130	imum of 4 credit hours from the following:  Menu Design	2
130	Menu Design	2
130 214	Menu Design	2
	110 110 135 135A 215 245	110 Introduction to Hospitality & Tourism

#### 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	
EDU	244	Human Growth/Development	
EDU	245	Policies and Procedures	
EDU	271	Educational Technology	3
Cours	se Req	uired 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.

### **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 <u>WebAdvisor</u> for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully <u>online</u>.

Program Name	Program Code
Advertising and Graphic Design – AAS Degree	A30100
Graphics Design – Certificate	C30100A
Web and Graphic Design – <i>Certificate</i>	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
Database Management Administrator- AAS Degree	A25150A
Database Management Developer – AAS Degree	A25150B
Database Developer – Oracle - Certificate	C25150B
Database Administrator - Certificate	C25150A
Information Systems Security – AAS Degree	A25270
Cisco Security - Certificate	C25270C
Red Hat Security – Certificate	C25270R
Medical Office Administration – AAS Degree	A25310
Medial Office Administration – <i>Diploma</i>	D25310
Medical Office Specialist - Certificate	C25310A
Medical Document Specialist - Certificate	C25310C
Networking Technology – AAS Degree	A25340
Data Storage and Virtualization - Diploma	D25340
Cisco Certified Network Associate (CCNA) - Certificate	C25340C
Cisco Certified Network Professional (CCNP) – Certificate	C25340I
Linux/Red Hat Administration - Certificate	C25340K
Microsoft Certified Systems Administrator (MCSA) - Certificate	C25340J
Office Administration – AAS Degree	A25370
Office Administration - Diploma	D25370
Office Specialist - Certificate	C25370A
Office Documents – Certificate	C25370B
Microsoft Office Specialist - Certificate	C25370C
Legal Office - Certificate	C2537AA

Simulation and Game Development – AAS Degree*	A25450
Game Programming and Design – <i>Diploma</i>	D25450A
Modeling and Animation – <i>Diploma</i>	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
Web Technologies – AAS Degree	A25290
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

<sup>\*</sup>Collaborative Agreements: Simulation and Game Development AAS degree – Level III instruction Service Agreement with Pitt Community College, Nash Community College, and Vance-Granville Community College.

## ADVERTISING & GRAPHIC DESIGN

The Advertising and Graphic Design curriculum is designed to provide students with knowledge and skills necessary for employment in the graphic design profession that emphasizes design, advertising, illustration, and digital and multimedia preparation of printed and electronic promotional materials.

Students will be trained in the development of concept and design for promotional materials, such as newspaper and magazine advertisements, posters, folders, letterheads, corporate symbols, brochures, booklets, preparation of art for printing, lettering and typography, photography, and electronic media.

Graduates should qualify for employment opportunities with graphic design studios, advertising agencies, printing companies, department stores, and a wide variety of manufacturing industries, newspapers, and businesses with in-house graphics operations.

## Advertising and Graphic Design Degree - A30100

General Education Courses

General Edu	
ENG 111	Expository Writing3
	Communication Elective3
	Humanities/Fine Arts Elective3
	Math Elective3
	Social/Behavioral Science Elective3
Humanities/	/Fine Arts Elective
(Select 3.0 h	ours from the following courses)
ÀRT 111	Art Appreciation3
HUM 230	Leadership Development3
	record processing and a second processing a second processing and a second processing and a second processing and a second processing and a second processing a second processing and a second processing a second processing and a second processing a second processing a second processing a second processing and a second processing a second process
Mathematic	s Elective
	ours from the following courses)
MAT 121	Algebra/Trigonometry
MAT 140	Survey of Mathematics
MAT 161	College Algebra
MAT 161A	College Algebra Lab
IVIAT TOTA	College Algebra Lab
Communica	ation Elective
	ours from the following courses)
COM 120	
0014 004	
COM 231	Public Speaking3
	, ,
Social/Beha	vioral Science Elective
Social/Beha (Select 3.0 h	vioral Science Elective lours from the following courses)
Social/Beha (Select 3.0 h PSY 150	vioral Science Elective lours from the following courses) General Psychology
Social/Beha (Select 3.0 h	vioral Science Elective lours from the following courses)
Social/Beha (Select 3.0 h PSY 150 ECO 252	Avioral Science Elective Hours from the following courses) General Psychology
Social/Beha (Select 3.0 h PSY 150 ECO 252	Avioral Science Elective Hours from the following courses) General Psychology
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110	vioral Science Elective lours from the following courses) General Psychology
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121	ivioral Science Elective iours from the following courses) General Psychology
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141	Invioral Science Elective
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 146	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 146 GRD 151 GRD 151 GRD 152	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 146 GRD 151	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 146 GRD 151 GRD 151 GRD 152	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 146 GRD 151 GRD 152 GRD 167	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 146 GRD 151 GRD 152 GRD 167 GRD 241	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 146 GRD 151 GRD 152 GRD 167 GRD 241 GRD 246	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 151 GRD 151 GRD 152 GRD 167 GRD 241 GRD 246 GRD 265	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 151 GRD 152 GRD 167 GRD 241 GRD 246 GRD 265 GRD 271	Interest
Social/Beha (Select 3.0 h PSY 150 ECO 252 Major Cours GRD 110 GRD 121 GRD 141 GRD 142 GRD 145 GRD 151 GRD 152 GRD 167 GRD 241 GRD 246 GRD 265 GRD 271 GRD 280	Interest

GRD 285	Client/Media Relations	2
WEB 140	Web Development Tools	
WEB 210	Web Design	
WEB 214	Social Media	
Major Elect	tives	
Select 2.0 h	ours from the following courses	
GRD 168	Photographic Imaging II	
	Multimedia Design I	
COE 112	Co-op Work Experience I	
	Requirements	

## 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.

Completion	Requirements	16 Credit Hours
GRD 263	Illustrative Imaging	3
GRD 152	Computer Design Technology I	3
GRD 151		
GRD 141	Graphic Design I	
GRD 110	Typography I	3

#### 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.

Comp	letion	Requirements	18 Credit Hours
WEB	210	Web Design	3
WEB	140	Web Development Tools	3
GRD	152	Computer Design Technology I	3
GRD	151	Computer Design Basics	3
GRD	110	Typography I	3

#### 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	
GRD	241	Graphic Design III	4
GRD	282	Advertising Copywriting	2
Comp	oletion	Requirements 1	6 Credit Hours

## Advertising and Graphic Design: Design Basis Certificate - C30100E

-Online

Basics of the principles of design and their applications.

Comp	Completion Requirements 14 Credit Hours			
GRD	151	Computer Design Basics	3	
GRD	145	Design Applications I	1	
GRD	142	Graphic Design II	4	
GRD	141	Graphic Design I	4	
GRD	121	Drawing Fundamentals I	2	

## Advertising and Graphic Design: Design Portfolio Certificate - C30100F

-Day

Certificate leads to creation of an online and physical graphic design portfolio.

Completion	Requirements	12 Credit Hours
GRD 285	Client/Media Relations	2
GRD 280	Portfolio Design	4
	Digital Print Production	
GRD 140	Web Development Tools	3

## 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

Gene	ral Edu	cation Courses
ENG	111	Expository Writing3
		Communication Elective3
		Humanities and Fine Arts Elective3
		Natural Sciences and Math Elective3
		Social/Behavioral Science Elective3
Natur	al Scia	nces and Mathematics Elective
		ours from the following courses)
MAT		Mathematical Models
BIO	110	Principles of Biology
СНМ		General Chemistry I4
GEL	120	Physical Geology4
PHY	151	College Physics I4
Cam.		tion Floative
		tion Elective ours from the following courses)
ENG		Argument-Based Research3
ENG		Literature-Based Research 3
ENG		Prof. Research and Reporting
COM		Intro Interpersonal Communication
COM		Public Speaking
Uuma	. mitica/	Fine Arte Fleetive
		Fine Arts Elective ours from the following courses)
	115	
ART		Art Appreciation
DRA	111	Theater Appreciation
MUS	110	Music Appreciation
PHI	240	Introduction to Ethics
Socia	ıl/Reha	vioral Science Elective
		ours from the following courses)
PSY	118	Interpersonal Psychology3
PSY	150	General Psychology 3
SOC	210	Introduction to Sociology
SOC	213	Sociology of the Family
SOC		Social Problems3
	151	Survey of Economics
ECO		Principles of Microeconomics
HIS	111	World Civilization I
POL	110	Introduction to Political Science
Maior	Cours	es
CIS	110	Introduction to Computers3
CIS	115	Introduction to Programming and Logic3
CTS		Information Systems Business Concept3
CTS	118	IS Professional Comm2
CTS		Hardware/Software Support3
CTS	135	Integrated Software Introduction4
CTS	155	Tech Support Functions
CTS	220	Advanced Hardware/Software Support
CTS	272	Desktop Support: Apps
CTS CTS	285 289	System Support Project
DBA	110	Database Concepts
NET	110	Data Communications/Networking
NOS	110	Operating Systems Concepts
NOS	130	Windows Single User
NOS	230	Windows Administration I
SEC	110	Security Concepts3
ACA	220	Professional Transition
Maior	Flectiv	ves List 1
		s from the following courses
		Co-op Work Experience I

CTI	140	Virtualization Concepts	. 3
CTI	240	Virtualization Admin I	. 3
CTS	210	Computer Ethics	. 3
CTS	240	Project Management	
NET	125	Networking Basics	. 3
NOS	120	Linux/UNIX Single User	. 3
<b>WEB</b>	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
		ves List 2	
		rs from the following courses	
CSC	139	Visual BASIC Programming	3
CTI	141	Cloud & Storage Concepts	
CTI	241	Virtualization Admin II	
CTS	293	Selected Topics in Computer Info. Technology	3
DBA	115	Database Applications	
NET	126	Routing Basics	
NOS	220	Linux/UNIX Administration I	
COE	122	Co-op Work Experience I	
CTS	288	Professional Practices in IT	
HBI	113	Survey of Medical Insurance	
OST	142	Med Terms II - Med Office	
OST		Medical Legal Issues	3
Gradu	uation I	Requirements73 Credit Hou	rs

## 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		Advanced Hardware/Software Support		
NET	110	Networking Concepts	3	
NOS	110	Operating System Concepts		
	Completion Requirements12 Credit Hours			

#### IT Foundations Certificate - C25260M

-Day, Evening, and Online

CIS CIS DBA	115 110	Introduction to Computers	.3 .3	
NOS SEC		Operating System Concepts		
<u></u>		Security Concepts		
Major Electives Select 3 hours from the following courses				

#### 

## 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.

Com	pletion	Requirements13 Ci	redit Hours
CTS	293	Selected Topics in CIT: Tech Support Mgr	2
CTS	285	Systems Analysis and Design	3
CTS	240	Project Management	3
CTS	118	IS Professional Communication	2
CTS	115	Information Systems Business Concepts	3

## 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.

Comp	oletion	Requirements	15 Credit Hours
NOS	230	Windows Admin I	3
NOS	130	Windows Single User	3
CTS	272	Desktop Support Apps	3
CTS	220	Advanced Hardware/Software Suppor	rt3
CTS	155	Tech Support Functions	3

#### **Open Source IT Certificate - C25260O**

-Day, Evening, and Online

#### 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.

Comput	er Programming Degree - A25130	SGD 168 SGD 171	Mobile SG Programming
General Edu	cation Courses	WEB 140	Web Development Tools
ENG 111		WEB 151	Mobile Application Dev I3
LING III	Expository Writing	WEB 179	JAVA Web Programming3
	Humanities/Fine Arts Elective		
<del></del>	Math Elective	wajor ⊑iec	
<del></del>	Social/Behavioral Science Elective		urs from the following courses
	Social/Behavioral Science Elective	ACA 111	College Student Success3
U.monitico/	Fine Arte Fleetive	CSC 249	Data Structures and Algorithms3
	Fine Arts Elective ours from the following courses)	CSC 258	JAVA Enterprise Programs3
HUM 110	Technology and Society3	CSC 278	JAVA Message Service3
			Oracle DBMS Administration3
HUM 115	Critical Thinking3	DBA 261	SQL Server DBMS Administration3
Mathematic	s Elective	SGD 125	SG Artificial Intellig3
	ours from the following courses)	SGD 268	Mobile SG Programming II3
MAT 161	College Algebra3	SGD 271	Adv Flash Programming3
	College Algebra Lab		Active Server Pages3
MAT 121	Algebra/Trigonometry		ColdFusion Programming3
IVIAT 121	Algebra/ HigoHometry	WED 201	Mobile Application Dev II3
Communica	tion Elective	Graduation	Requirements 68 Credit Hours
	ours from the following courses)		
ENG 114	Prof. Research and Reporting3	.ΙΔVΔ Ε	Programming Certificate - C25130A
COM 120	Intro Interpersonal Communication		
COM 120	intro interpersonal communication	-Day and	Offiliale
Social/Roha	vioral Science Elective	This soulifie	ata ia danimand familia atudant wha wishan to assuins
	ours from the following courses)		ate is designed for the student who wishes to acquire
PSY 150	General Psychology3		ng skills for Internet and Intranet application development.
SOC 210	Introduction to Sociology		ill learn to program Internet user interfaces, HTML, C++,
300 210	introduction to Sociology		other computer languages currently used for Internet and
Major Cours	oc.	intranet app	plication and applet development.
CIS 110	Introduction to Computers3	CCC 151	IAV/A Dragramming
CIS 110	Basic PC Literacy		JAVA Programming
CIS 111	Introduction to Programming and Logic		Advanced JAVA Programming
CSC 133	C Programming	CSC 258	JAVA Enterprise Programs
CSC 133	C++ Programming		Database Programming I
CSC 134	COBOL Programming	WEB 151	Mobile Application Dev I
CSC 130	Visual BASIC Programming	Completio	n Requirements15 Credit Hours
CSC 153	JAVA Programming		
CSC 233	Adv C Programming	Visual	Basic Programming Certificate -
CSC 234	Advanced C++		IR
CSC 236	Adv Cobal Programming		
CSC 239	Advanced Visual BASIC	-Online	
CSC 251	Advanced JAVA Programming		
CSC 289	Programming Capstone Project	Doolgi loa it	or individuals interested in acquiring the advanced
CTS 115	Information Systems Business Concepts	programm	ng skills necessary to design and implement Visual
CTS 285	Systems Analysis and Design	2, to o p. o	grams. The student will learn how to design Visual BASIC
DBA 110	Database Concepts	p. 0 g. a a	sing event-driven programming techniques, implement
NET 110	Networking Concepts	our ont into	rface design standards, create reusable code,
NOS 110	Operating System Concepts	mampaiato	records in both a file-based system and a database
NOS 120	Linux/UNIX Single User	0,000, 0	d program customization using API calls. Emphasis is
SEC 110	Security Concepts		roper program design techniques.
SLC 110	Security Concepts		\"
Major Electi	vas List 1	CSC 139	Visual BASIC Programming
	rs from the following courses	CSC 239	Advanced Visual BASIC
COE 112	Co-Op Work Experience I	DBA 115	Database Applications
CSC 152	SAS4	1120 100	Active Server Pages
CSC 152	C# Programming		n Requirements 12 Credit Hours
DBA 120	Database Programming I		
SGD 115	Physically-Based Modeling		ogramming Certificate - C25130C
WEB 110	Internet / Web Fundamentals	_	- <del>-</del>
WEB 115	Web Markup and Scripting		
**LD 110	vvoo iviai kup ariu ooripiiriy	The C++ Pr	rogramming certificate offers courses for students
Major Electiv	ves List 2		n upgrading their programming skills by acquiring
	rs from the following courses		in an object-oriented programming language. This
CSC 253	Advanced C# Programming3		also appropriate for individuals who are new to
DBA 115	Database Applications	, ,	ng. Instruction in C++ programming includes
DBA 113	Oracle DB Programming II		ited programming topics (classes, inheritance, and
DBA 221	SQL Server DB Programming II		sm) as well as procedural programming topics (data
DBA 223	MvSQL DB Programming II		rol structures, functions, arrays, pointers and strings).

	background in computer programming by offering an
CSC 134 C++ Programming3	introductory course in database and two programming
CSC 234 Advanced C++3	languages such as C++, Visual Basic, Java, COBOL and
CSC 249 Data Structure & Algorithms	
DBA 120 Database Programming I3	C#.
Completion Requirements13 Credit Hours	
	CIS 115 Intro to Prog & Logic3
C# Programming Certificate - C25130D	DBA 110 Database Concepts3
	Introductory Programming3
-Online	Elective 3
Designed for individuals interested in acquiring the advanced	Introductory Programming
programming skills necessary to design and implement C#	(Select 3.0 hours from the following courses)
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	CSC 133 C Programming
both a file-based system and a database system, and program	CSC 134 C++ Programming3
customization using API calls. Emphasis is placed on proper	CSC 135 COBOL Programming3
program design techniques	CSC 139 Visual BASIC Programming
program design teorniques	CSC 151 Java Programming3
CSC 153 C# Programming3	CSC 153 C# Programming3
CSC 253 Adv C# Programming3	Electives
DBA 115 Database Applications3	(Select 3.0 hours from the following courses)
WEB 180 Active Server Pages	(Select 3.0 flodis from the following courses)
Completion Requirements12 Credit Hours	CSC 152 SAS3
	DBA 115 Database Application
Advanced Computer Programming	DBA 120 Database Programming I
	SGD 115 Physically-Based Modeling
- C25130G, -Day	SGD 168 Mobile SG Programming I
	SGD 171 Flash SG Programming3
The Advanced Computer Programming Certificate will give	WEB 110 Internet/Web Fundamentals
students the opportunity to achieve a broad and advance	WEB 115 Web Markup and Scripting3
background in computer programming by offering advance	WEB 151 Mobile Application Dev I
courses in the languages outlined for Fundamentals of computer	Completion Requirements12 Credit Hours
Programming Certificate	
DBA 120 or NOS 1303	COMPLITED TECHNICI COV
CSC 249 Data Structure & Algorithms	COMPUTER TECHNOLOGY
Advanced Programming Elective3	INTECDATION
Advanced Programming Elective3 Advanced Elective3	INTEGRATION
Advanced Elective3	
Advanced Elective	This unique degree program provides skills and credentials that
Advanced Elective3	This unique degree program provides skills and credentials that can qualify graduates for a variety of positions – in organizations
Advanced Programming Elective (Select 3.0 hours from the following courses)	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
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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.
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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,
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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
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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 3  Advanced Elective	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
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Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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,
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Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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.
Advanced Programming Elective         3           Advanced Programming Elective         (Select 3.0 hours from the following courses)           CSC 233 Advanced C Programming         3           CSC 234 Advanced CH+ 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	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
Advanced Programming Elective         3           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 III         3           WEB 179 Java Web Programming         3           WEB 251 Mobile Application Dev II         3	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.
Advanced Programming Elective         3           Advanced Programming Elective         (Select 3.0 hours from the following courses)           CSC 233 Advanced C Programming         3           CSC 234 Advanced CH+ 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	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
Advanced Programming Elective         3           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 III         3           WEB 179 Java Web Programming         3           WEB 251 Mobile Application Dev II         3	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
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 II 3 SGD 268 Mobile SG Programming II 3 WEB 179 Java Web Programming II 3 WEB 251 Mobile Application Dev II 3 Completion Requirements 12 Credit Hours	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 Expository Writing
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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 Expository Writing
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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 Expository Writing
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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 Expository Writing
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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 Expository Writing
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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 Expository Writing
Advanced Programming Elective (Select 3.0 hours from the following courses)  CSC 233 Advanced C Programming	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 Expository Writing

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	0 hours from the following courses)  Database Management - Developer						
ART TIT Art Appreciation			•				
DRA 111	Theatre Appreciation3	De	gree	- <b>A25150B</b> - Day			
HUM 115	Critical Thinking3						
MUS 110	Music Appreciation3	Gen	eral Ec	ducation Courses			
PHI 240	Introduction to Ethics	ENG	111	Expository Writing	3		
				Communication Elective	3		
Social/Beha	avioral Science Elective			Humanities/Fine Arts Elective	3		
(Select 3.0 h	nours from the following courses)			Math Elective			
ECO 151	Survey of Economics			Social/Behavioral Science Elective			
ECO 251	Principles Of Microeconomics						
HIS 111	World Civilizations I	Hum	anities	s/Fine Arts Elective			
POL 110	Introduction to Political Science			hours from the following courses)			
PSY 118	Interpersonal Psychology	,	1 110	Technology and Society	3		
PSY 150	General Psychology		1 115	Critical Thinking	3 ว		
SOC 210	Introduction to Sociology	11010	1 110	Ontical minking			
SOC 213	Sociology of the Family	Math	omati	cs Elective			
SOC 220	Social Problems			hours from the following courses)			
300 220	Social Floblettis		161	College Algebra	2		
Notural Said	ences and Mathematics Elective		121	Algebra/Trigonometry	ວ		
		IVIA	121	Algebra/ mgonometry	s		
BIO 110	ours from the following courses)	Cam		estion Floative			
CHM 151	Principles of Biology			cation Elective			
	General Chemistry I		1 120	hours from the following courses) Intro Interpersonal Communication	2		
GEL 120	Physical Geology4						
MAT 115	Mathematical Models	COIV	1 231	Public Speaking	3		
PHY 151	College Physics I4	Cas:	al/Dah	avieral Caionas Flastiva			
Maiar Caus			Social/Behavioral Science Elective				
Major Courses		,		hours from the following courses)	2		
CET 242	High Perf Computing (Datacenter Troubleshooting)		151	Survey of Economics			
COE 112	Co-op Work Experience I	HIS	111	World Civilizations I	s		
COE 122	Co-op Work Experience II						
COE 132	Co-op Work Experience III		r Cou		2		
CTI 110	Web, Pgm & DB Foundation	CIS	110				
CTI 120	Network & Sec Foundation	CIS	111				
CTI 130	OS and Device Foundation	CIS	115		პ		
CTI 140	Virtualization Concepts	CSC		3 3 3			
CTI 141	Cloud & Storage Concepts	CSC		3			
CTI 193	Troubleshooting Methodologies	CTS	115		3		
CTI 240	Virtualization Admin I	CTS	285	- ,			
CTI 241	Virtualization Admin II	DBA					
CTS 115	Info Sys Business Concept	DBA			3		
CTS 118	IS Professional Comm	DBA					
HPC 140	Intro to HPC Architecture (Datacenter Design & PR)3	DBA					
NET 125	Networking Basics3	DBA		and the second s			
NET 126	Routing Basics	DBA					
NOS 130	Windows Single User3	DBA					
NOS 230	Windows Admin I	NET					
OMT 154	Customer Satisfaction	NOS			3		
Graduation	Requirements 73 Credit Hours	SEC	110	Security Concepts	3		
DATA	BASE MANAGEMENT	NA-!-	<b></b>	Siren Lint 4			
				Major Electives List 1			
	The Database Management curriculum prepares graduates for			urs from the following courses	4		
employment with organizations that use database management			111	• •			
system som	vare to process, manage, and communicate	COE	121	Co-Op Work Experience II	1		

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

Graduation Requirements.......70 Credit Hours

Selected Topic ......1

Oracle Database Programming II......3

SQL Server Database Programming II......3

Data Warehousing and Mining......3 Selected Topic.....2

ColdFusion Programming ......3

The Database Management curriculum prepares graduates for employment with organizations that use database management system software to process, manage, and communicate

DBA

DBA

DBA

DBA

DBA

WEB

191

220

221

285

291

185

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.

Co	Ation Courses  xpository Writing	3 3 3
HUM 110 Te	ne Arts Elective s from the following courses) echnology and Society ritical Thinking	3
MAT 115 M	Elective rs from the following courses) Mathematical Models College Algebra	3
COM 120 In	on Elective rs from the following courses) tro Interpersonal Communication	3
(Select 3.0 hour ECO 151 St	oral Science Elective rs from the following courses) urvey of Economics	
CIS 111 CIS 115 CTS 115 CTS 285 DBA 110 DBA 115 DBA 120 DBA 210 DBA 230 DBA 240 DBA 289 NET 110 NOS 110	Introduction to Computers Basic PC Literacy Introduction to Programming and Logic Information Systems Business Concept Systems Analysis and Design Database Concepts Database Applications Database Programming I Database Administration Database in Corporate Environments Database Analysis/Design Database Project Networking Concepts Security Concepts	2 3 3 3 3 3 3 3 3 3 3 3 3
COE 111 (	s List 1 rom the following courses Co-op Work Experience I	1
DBA 191 S DBA 260 O NOS 130	s List 2 rom the following courses Selected Topic	3

			170 Credit Hours
Grauu	auon	requirements	10 Credit nours

#### Oracle DBA Programming Certificate-C25150B

-Day and Evening

This certificate is designed for the student who wishes to acquire Oracle database theory, SQL programming, database administration fundamentals, and performance tuning techniques. Completion of CIS 115 or its equivalent is required before entering the program.

DBA DBA	. — -	Database Programming I	3
		Optimization	3
DBA	230	Database in Corporate Environments	3
DBA	240	Database Analysis/Design	3
DBA	260	Oracle DBMS Administration	3
Comp	letion	Requirements15 Credit Hours	s

#### 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	192	Selected Topics in Database Management: Oracle		
		Internet Application	2	
DBA	220	Oracle DB Programming II	3	
DBA	240	Database Analysis/Design		
DBA	291	Selected Topics in Database Management: Oracle		
		Project	1	
Comp	Completion Requirements 12 Credit Hours			

## INFORMATION SYSTEMS SECURITY

Information Systems Security covers a broad expanse of technology concepts. This curriculum provides individuals with the skills required to implement effective and comprehensive information security controls.

Course work includes networking technologies, operating systems administration, information policy, intrusion detection, security administration, and industry best practices to protect data communications.

Graduates should be prepared for employment as security administrators. Additionally, they will acquire the skills that allow them to pursue security certifications.

## Information Systems Security Degree - A25270

Gene	ral Edu	cation Courses
ENG	111	Expository Writing
		Communication Elective
		Humanities/Fine Arts Elective.
		Math Elective
		Maur Liective

3

	Social/Behavioral Science Elective3	
		Option 3-Radhat Certified Security Specialist Track
	/Fine Arts Elective	NOS 220 Linux/UNIX Admin I
	nours from the following courses)	NOS 221 Linux/UNIX Admin II
ART 111	Art Appreciation	NOS 222 Linux/UNIX Admin III
DRA 111	Theatre Appreciation	NOS 230 Windows Admin I
HUM 115 MUS 110	Critical Thinking	Option 4-High Technology Criminal Investigations Diploma
PHI 240	Music Appreciation	Track
FII 240	introduction to Ethics	CCT 121 Computer crimes Investigation4
Natural Sci	ences and Mathematics Elective	CCT 240 Data Recovery Techniques
	nours from the following courses)	CTS 120 Hardware/Software Support
BIO 110	Principles of Biology4	CTS 220 Advanced Hardware/Software Support
CHM 151	General Chemistry I	Graduation Requirements75 Credit Hours
GEL 120	Physical Geology4	Gradadion regalionomo illinininininininin ro Gradit ricaro
MAT 115	Mathematical Models	Cisco Security Certificate -C25270C
PHY 151	College Physics I4	
	<b>3</b> ,	<ul> <li>Day, Evening, and Online</li> </ul>
Communic	ation Elective	NET 225 Pouting & Switching I
(Select 3.0 h	nours from the following courses)	NET 225         Routing & Switching I         3           NET 226         Routing & Switching II         3
ENG 112	Argument-Based Research3	NET 270 Building Scalable Network
ENG 113	Literature-Based Research3	SEC 150 Secure Communications
ENG 114	Prof. Research and Reporting3	
COM 120	Intro Interpersonal Communication3	SEC 193 Secure Routing/Firewalls
COM 231	Public Speaking3	Completion Requirements 15 Credit nours
		Deal Hat Consults Contificate COFOZOD
	avioral Science Elective	Red Hat Security Certificate -C25270R
	nours from the following courses)	<ul> <li>Day, Evening, and Online</li> </ul>
ECO 151	Survey of Economics3	
ECO 251	Prin. Of Microeconomics3	SEC 150 Secure Communications
HIS 111	World Civilizations I3	NOS 220 Linux/UNIX Admin I3
POL 110	Introduction to Political Science3	NOS 221 Linux/UNIX Admin II
PSY 118	Interpersonal Psychology3	NOS 222 Linux/UNIX Admin III
PSY 150	General Psychology3	NOS 230 Windows Admin I
SOC 210	Introduction to Sociology3	Completion Requirements15 Credit Hours
SOC 213	Sociology of the Family3	
SOC 220	Social Problems3	MEDICAL OFFICE
		WIEDICAL OFFICE
Major Cours		ADMINISTRATION
CIS 110	Introduction to Computers	
CIS 115 CJC 111	Introduction to Programming and Logic	This curriculum prepares individuals for entry-level medical
CJC 111 CTS 115	Intro to Criminal Justice	administrative support positions including office or hospital
	Information Systems Business Concepts	secretary, medical records clerk, health claims specialist,
DBA 110	Networking Basics	insurance claims processor, patient services representative, and
NET 125		medical transcriptionist.
NET 126	Routing Basics	
NOS 110		Coursework includes processing and maintaining medical records,
NOS 120 NOS 130	Linux/UNIX Single User	utilizing office equipment and software, medical law and ethics,
	Windows Single User	billing and coding, and transcribing medical documents.
SEC 110	Security Concepts	
SEC 150	Secure Administration I	Employment opportunities include the offices of health providers
SEC 160		and allied health facilities, insurance claims processors, clinical
SEC 210	Intrusion Detection	laboratories, and medical and hospital equipment manufacturers
SEC 220	Defense-In-Depth	and suppliers.
SEC 289	Security Capstone Project	
Major Floct	ives (Select one Option grouping below)	Medical Office Administration Degree -
wajor Liect	ives (Select one Option grouping below)	A25310
Ontion 1-Ci	sco Certified Network Assoc Security Track	
NET 225	Routing & Switchinig I	-Online
NET 226	Routing & Switching II	One and Education Occurs
NET 270	Building Scalable Network	General Education Courses
SEC 193	Secure Routing/Firewalls	ENG 111 Expository Writing
OLO 193	Coodic (Codding/) iicwalis	Humanities and Fine Arts Elective
Option 2-GI	obal Certified Windows Security Admin (GCWN)	(Choose 3 credit hours from the following courses)
Track	The state of the s	ART 111 Art Appreciation
NOS 230	Windows Admin I	MUS 110 Music Appreciation
NOS 230	Windows Admin II	HUM 115 Critical Thinking3
NOS 232	Windows Admin III	Mathematics Electives
NET 198	Seminar in: Windows Administration	(Choose 3 credit hours from the following courses)
		(Oncose a creat hours from the following COUISES)

MAT 140	Survey of Mathematics	
MAT 115	Mathematical Models	3
BIO 110	Principles of Biology	4
	ations Electives	
	redit hours from the following courses)	_
ENG 114	Professional Research and Reporting	3
ENG 112	Argument-based Research	3
COM 120	Intro Interpersonal Comm	0
Social and	Behavioral Sciences Electives	
	redit hours from the following courses)	
PSY 150	General Psychology	3
SOC 210	Introduction to Sociology	
ECO 251	Prin of Microeconomics	
HIS 111	World Civilizations I	
1110 111	VVOIId GIVIIIZALIGIIG I	
Major Cour	ses	
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	
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 241	Medical Office Transcription I	2
OST 243	Medical Office Simulation	
OST 281	Emerg Issues in Medical Office	3
	•	
OST Electiv		
•	redit hours from the following courses)	
COE 111	Co-op Work Experience I	1
COE 121	Co-op Work Experience 1	1
COE 112	Co-op Work Experience II	2
OST 247	Procedure Coding	2
OST 248	Diagnostic Coding	2
OST 236	Adv. Word/Information Processing	3
OST 181	Introduction to Office Systems	3
OST 132	Keyboard Speed Building	2
OST 153	Office Finance Solutions	
OST 233	Desktop Publishing	3
OST 135	Adv. Text Entry and Formatting	
OST 284	Emerging Technologies	2
OST 138	Advanced Software Applications	
CTS 130	Spreadsheet	
CTS 230	Advanced Spreadsheet	3
CIS 111	Basic PC Literacy	2
Graduation	Requirements 67 Credit Hou	ire

## 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 ENG 114 Professional Research and Reporting......3 COM 120 Intro Interpersonal Comm......3 **Major Courses** ENG 111 OST 122 Expository Writing......3 Office Computations ......2 OST 131 Keyboarding ......2 Text Entry and Formatting .......3 OST 134 OST 137 Office Software Applications......3 OST 141 OST 142 OST 148 Medical Coding, Billing, and Insurance ......3 OST 149 Medical Legal Issues ......3 Text Editing Applications .......3 OST 164 OST 243 Medical Office Simulation......3 OST 247 Procedure Coding......2 OST 248 Diagnostic Coding ......2 OST 281 Emerging Issues in Medical Office......3

## Medical Office Specialist Certificate - C25310A

Graduation Requirements ......41 Credit Hours

-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**

		Requirements18 Credit Ho	
OST 2	43	Medical Office Simulation	3
OST 1	84	Records Management	3
OST 1	48	Medical Coding, Billing, and Insurance	3
OST 1	42	Medical Terms II-Medical Office	3
OST 1	41	Medical Terms I-Medical Office	3
OST 1	36	Word Processing	3

## 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**

Comp	pletio	n Requirements	14 Credit Hours
OST	241	Medical Office Transcription I	2
OST	164	Text Editing Applications	3
OST	142	Medical Terms II – Medical Office	3
OST	141	Medical Terms I – Medical Office	3
OST	134	Text Entry and Formatting	

### **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

Gene	ral Fdı	ucation Courses	
ENG		Expository Writing	3
		Communication Elective	
		Humanities/Fine Arts Elective	
		Math ElectiveSocial/Behavioral Science Elective	3
		Social/Benavioral Science Elective	J
Huma	anities	/Fine Arts Elective	
(Selec	ct 3.0 h	ours from the following courses)	
ÀRT		Art Appreciation	3
DRA	111	Theatre Appreciation	3
HUM	115	Critical Thinking	
MUS	110	Music Appreciation	
PHI	240	Introduction to Ethics	3
Matri	-I C-i	anasa and Mathamatica Floating	
		ences and Mathematics Elective nours from the following courses)	
BIO	110	Principles of Biology	Δ
CHM		General Chemistry I	
GEL		Physical Geology	
MAT		Algebra/Trigonometry	
PHY		College Physics I	
гпі	131	College FifySics 1	4
		ation Elective	
(Sele	ct 3.0 h	nours from the following courses)	
COM		Intro Interpersonal Communication	3
COM	231	Public Speaking	3
ENG	112	Argument-Based Research	3
ENG	113	Literature-Based Research	
ENG	114	Prof. Research and Reporting	3
Socia	ıl/Beha	avioral Science Elective	
		nours from the following courses)	
ÈCO		Prin. Of Microeconomics	3
ECO	151	Survey of Economics	
HIS	111	World Civilizations I	
POL	110	Introduction to Political Sciences	
PSY	118	Interpersonal Psychology	
PSY		General Psychology	3
	210	Introduction to Sociology	
SOC		Sociology of the Family	
SOC		Social Problems	
	_		
Major CIS	Cours 110	ses Introduction to Computers	3
CIS	115	Introduction to Programming and Logic	
CTS	115	Information Systems Business Concepts	د
	110	Hardware/Software Support	

DBA	110	Database Concepts	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NET	225	Routing and Switching I	3
NET	226	Routing and Switching II	3
NET	240	Network Design	3
NOS	110	Operating Systems Concepts	3
NOS	130	Windows Single User	3
NOS	230	Windows Administration I	3
SEC	110	Security Concepts	3

#### **Concentration Electives List**

Selec	t one o	option from grouping below:	
Optio	on 1 – I	Microsoft Certified IT Professional Track	
NOS	231	Windows Administration II	3
NOS	232	Windows Administration III	3
NET	198	Windows Administration V	3
	and o	one of the following:	
COE	113	Co-Op Work Experience	3
CTS	220	Advanced Hardware/Software Support	3
NOS	220	Linux/Unix Admin I	3
SEC	160	Security Admin I	3
Optio	n 2: C	isco Certified Network Professional Track	
NET	270	Building Scalable Networks	3
NET		Multi-Layer Networks	
NET	273	Internetworking Support	3
	and o	ne of the following:	
COE	113	Co-op Work Experience	3
CTS	220	Advanced Hardware/Software Support	
NOS	220	Linux/Unix Admin I	
SEC	160	Security Admin I	3
		ed Hat Certified Engineer Track	
NOS		Linux/UNIX Administration I	
NOS	221	Linux/UNIX Administration II	
NOS	222	Linux/UNIX Administration III	3
		one of the following:	
COE		Co-op Work Experience	
CTS		Advanced Hardware/Software Support	
SEC	160	Secure Admin I	3
<u>Optio</u>	n 4: [	Oata Storage & Virtualization Track	
CTI		Virtualization Concepts	3
CTI	240	Virtualization Admin I	
CTI	241	Virtualization Admin II	3
		ne of the following	
COE		Co-op Work Experience	3
CTS	220	Advanced Hardware/Software Support	
SEC	160	Security Admin I	3
Grad	uation	Requirements 72 Credit I	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			
COE	112	Co-op Work Experience I	2			
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			
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			
Comp	Completion Requirements 41 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.

Completion Requirements12 Credit Hours					
NET	226	Advanced Router and Switching II	3		
NET	225	Advanced Router and Switching I	3		
NET	126	Routing and Switching II	3		
NET	125	Routing and Switching I	3		

## CISCO Certified Network Professional (CCNP) Certificate - C25340l

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.

Comp	oletion	Requirements	12 Credit Hours
		Co-Op Work Experience	
		Security Admin I	
		Linux/Unix Admin I	
•	r Electi		
		Major Elective	3
		Internetworking Support	
		Multi-Layer Networks	

Building Scalable Networks ......3

## 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 User3			
		Linux/UNIX Administration I			
NOS	221	Linux/UNIX Administration II			
NOS	222	Linux/UNIX Administration III			
	Completion Requirements				

## Microsoft Certified IT Professional Certificate - C25340J

- Day and Evening

Complet	ion Requirements	15 Credit Hours
NOS 23	2 Windows Administration	า III3
NOS 23	<ol> <li>Windows Administration</li> </ol>	า II3
NOS 23	<ol> <li>Windows Administration</li> </ol>	ı I3
NOS 13	0 Windows Single User	3
NET 19	8 Windows Administration	ı IV3

#### 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	Expository Writing3					
Huma	nities a	and Fine Arts Electives					
(Choo	se 3 cr	edit hours from the following courses)					
		Art Appreciation3					
MUS	110	Music Appreciation3					
HUM	110	Technology and Society3					
HUM	115	Critical Thinking					
Mathe	ematics	s Electives					
(Choo	se 3 cr	edit hours from the following courses)					
ΜAΤ	140	Survey of Mathematics3					
MAT	115	Mathematical Models3					
BIO	110	Principles of Biology4					
Comr	nunica	tions Electives					
(Choo	se 3 cr	edit hours from the following courses)					
ÈNG	114	Professional Research and Reporting3					
		Argument-based Research3					
	120						
Socia	I and B	Behavioral Sciences Electives					
(Choo	se 3 cr	edit hours from the following courses)					
		General Psychology3					
SOC	210	Introduction to Sociology3					

ECO	251	Prin of Microeconomics3	Office	Sn	ecialist Certificate - C25370A
HIS	111	World Civilizations I	- Online	, <b>O</b> P	
Maio	r Cours	205			
ACA		Professional Transition	The Office	e Spe	ecialist certificate program provides the technical and
		Business Communication	administra	ative	support skills necessary for entry-level employment in
BUS			a variety	of office	ces. This program includes document processing,
OST		Office Computations	records n	nanao	gement, Internet research, editing, proofreading, office
OST		Text Entry and Formatting			and office culture issues. Employment opportunities
OST		Advanced Text Entry and Formatting4			is of business and industry.
OST		Word Processing3	Oxfor III ai	ıı aı oa	o or business and industry.
OST	137	Office Software Applications	Major Co	ourco	6
OST	138	Advanced Software Applications3	OST 12		S Office Computations2
OST	140	Internet Comm/Research2	OST 12		
OST	153	Office Finance Solutions			Text Entry and Formatting
OST	164	Text Editing Applications	OST 140		nternet Comm/Research2
OST	181	Introduction to Office Systems	OST 184		Records Management3
OST		Records Management	OST 136	6 V	Nord Processing3
OST		Issues in Office Technology	OST 16	4	Text Editing Applications3
OST		Office Publications Design	OST 188	8 I	ssues in Office Technology2
OST		Advanced Word/Information Processing	Completi	ion R	equirements18 Credit Hours
OST		Emerging Technologies	Office	Do	cuments Certificate - C25370B
OST	289	Administrative Office Management	-Online	, טט	Cuments Certificate - 023370D
OST	Electiv	29	-Online		
		credit hours from the following courses:	The Office	e Doo	cuments certificate program provides the skills
Onioo	30 1110	orealt floure from the following courses.			lesign and produce quality professional documents
CIS	111	Pagio DC Litoropy			
COE		Basic PC Literacy			ext, graphics, illustrations, and photographs. This
		Co-op Work Experience I			orogram includes design templates, graphic
COE		Co-op Work Experience I			pols, color schemes, advanced layout techniques,
COE		Co-op Work Experience II			d processing, editing, and proofreading. Employment
CTS		Spreadsheet3			nclude offices that produce newsletters, flyers, logos,
CTS		Advanced Spreadsheet	signs, and	d forn	ns.
OST		Keyboarding2			
OST		Keyboard Speed Building2	Major Co	ourse	s
OST	153	Office Finance Solutions2	OST 130	6 \	Word Processing3
OST	236	Adv. Word/Information Processing	OST 140		nternet Comm/Research
OST	284	Emerging Technologies2	OST 164		Text Editing Applications
OST	233	Desktop Publishing 3	OST 23		Office Publications Design3
Grad	uation	Requirements 65 Credit Hours	OST 230	6 4	Advanced Word/Information Processing
		•			equirements14 Credit Hours
٧ŧ	iaa A	dministration Dinlama D25270	Completi		equirements
		dministration Diploma - D25370	Micro	coff	t Office Specialist Certificate -
-Onlir	ne				
<b>T</b>	> cc		C2537	70C	
		dministration diploma program is designed for the	- Online		
indivi	dual en	tering, upgrading, or retraining in the office occupation			
field.	Course	work includes keyboarding, records management, office	Major Co	nurse	•
		written communications, word processing, and software	CTS 23		Advanced Spreadsheet3
applic	cations.	Through study in these areas, the individual will be able	OST 14		nternet Communication/Research
to fur	nction ef	ffectively in a variety of office occupations. Employment	OST 140		
		are available in business, government, and industry.			Nord Processing
			OST 13		Office Software Applications
Gene	eral Edu	ucation Courses			lequirements14 Credit Hours
ENG	111	Expository Writing3	Completi	ion K	equirements14 Orealt Hours
	_				
	r Cour		<b>~==</b>		E ADMINIOTO ATION!
$\Delta \cap \Delta$	220	Professional Transition 1	I	17 *1	F ADMINISTRATION/

#### 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.

Gradi	Graduation Requirements 37 Credit Hours				
OST	286	Professional Development	3		
OST	188	Issues in Office Technology	2		
OST	184	Records Management	3		
OST	181	Introduction to Office Systems	3		
OST	164	Text Editing Applications	3		
OST	140	Internet Comm/Research	2		
OST	137	Office Software Applications	3		
OST	136	Word Processing	3		
OST	135	Adv Text Entry and Formatting	4		
OST	134	Text Entry and Formatting	3		
OST	122	Office Computations	2		
ACA	220	Professional Transition	1		

Major Courses	PSY	150	General Psychology	
OST 134 Text Entry and Formatting3	SOC	210	Introduction to Sociology	3
OST 136 Word Processing3		_		
OST 155 Legal Terminology	Major			•
OST 156 Legal Office Procedures	SGD	111	Intro. To SGD	
OST 252 Legal Transcription I	SGD SGD	112 114	SGD Design3D Modeling	
Completion Requirements 15 Credit Hours	SGD	114	Graphic Design Tools	
	SGD	134	SGD Quality Assurance	دع
SIMULATION & GAME	SGD	158	SGD Business Management I	3
OIMOLATION & GAML	SGD	163	SG Documentation	3
DEVELOPMENT	SGD	164	SG Audio/Video	
The Simulation and Game Development curriculum provides a	SGD	174	SG Level Design	
broad background in simulation and game development with	SGD	212	SGD Design II	3
practical applications in creative arts, visual arts, audio/video	SGD	289	SGD Project	3
technology, creative writing, modeling, design, programming and				
management.	Major			
			ust select 1 group below, all course in	the selected
Students will receive hands-on training in design, 3D modeling,	group	must I	be completed in order listed)	
software engineering, database administration and programming	Ontinu		Dama Dra avanania a	
for the purpose of creating simulations and games.	•		Game Programming	2
	CIS	115	Intro to Prog & Logic	
Graduates should qualify for employment as designers, artists,	CSC CSC	134 234	C++ Programming Adv C++ Programming	
animators, programmers, database administrators, testers, quality	SGD	171	Flash SG Programming	
assurance analysts, engineers and administrators in the	SGD	285	SG Software Engineering	
entertainment industry, the health care industry, engineering,	OOD	200	OG GORWARD Erigineering	
forensics, education, NASA and government agencies.	Option	n B – G	Game Programming	
	CIS	115	Intro to Prog & Logic	3
Simulation and Game Development	CSC	151	JAVA Programming	
•	CSC	251	Adv JAVA Programming	3
Degree - A25450	SGD	171	Flash SG Programming	
0 151 ( 0	SGD	285	SG Software Engineering	3
General Education Courses				
Required Courses			Game Design & 3D Modeling	
ACA 111 College Student Success	SGD	117	Art for Games	
ACA 111 College Student Success	SGD	113	SGD Programming	
Communications Elective	SGD	162	SD 3D Animation	
Social/Behavioral Science Elective	SGD SGD	165 214	SG Character Development	
Math Elective	360	214	3D Modeling II	
Humanities/Fine Arts Elective	Maior	Electi	ives List I	
Physical Science Elective			ours from the following courses)	
<del></del>	COE		Co-op Work Experience I	2
Math Elective	DBA	110	Database Concepts	
(Select 3.0 hours from the following courses)	SGD	167	SG Ethics	
MAT 121 Algebra/Trigonometry I	SGD	168	Mobile SG Programming	3
MAT 161 College Algebra 3	SGD	244	3D Modeling III	3
MAT 171 Precalculus Algebra 3	SGD	271	Adv Flash Programming	
	SGD	274	SG Level Design II	3
Physical Science Elective (Scloot 2.0 hours from the following courses)				
(Select 3.0 hours from the following courses)			ives List II	
PHY 151 College Physics I	`		iours from the following courses)	
SGD 115 Physically-Based Modeling	SGD	135	Serious Games	3
30D 100 301 Hysiology/Minesis	SGD	159	SGD Production Management	
Humanities/Fine Arts Elective	SGD	192 237	Selected Topics	
(Select 3.0 hours from the following courses)	SGD SGD	268	Rigging 3D Models  Mobile SG Programming II	3
DRA 126 Storytelling			Requirements	
ENG 126 Creative Writing I	Oraut	ation	requirements	71 Orcuit Hours
HUM 130 Myth in Human Culture	_	_		
-	Gan	ne P	Programming and Desig	n Diploma
Communication Elective	- D2			-
(Select 3.0 hours from the following courses)		J-7-0	<b>~</b> /·	
ENG 112 Argument-Based Research3	Gener	ral Edi	ucation Courses	
COM 120 Intro Interpersonal Communication	ENG	111	Expository Writing	3
OcaleMasteria Colonia El di	2110		Math Elective	
Social/Behavioral Science Elective				
(Select 3.0 hours from the following courses)	Physi	cal Sc	cience Elective	
ECO 151 Survey of Economics			nours from the following courses)	
HIS 111 World Civilizations I	•		,	

PHY SGD	151 115	College Physics I	SGD 212	SGD Design IIn Requirements	3
	Elective ct 3 0 h	ve nours from the following courses)	Mobile	<b>Game Developmen</b>	t Certificate -
MAT	121	Algebra/Trigonometry I	C25450	_	
MAT	161	College Algebra			
MAT	171	Precalculus Algebra	SGD 112	SGD Design	
1417 (1		1 1000100100 / 1190010	SGD 114	3D Modeling	3
Maio	r Cour	ses	SGD 116	Graphic Design Tools	
CIŚ	115	Intro to Prog & Logic3	SGD 168	Mobile SG Programming	
CSC	134	C++ Programming3	SGD 268	Mobile SG Programming II	3
CSC	234	Adv C++ Programming3		Major Elective	
SGD	111	Introduction to Simulation and Game Development3	Maior Elec	tives	
SGD	112	SGD Design3	Major Elec		2
SGD	114	3D Modeling 3	SGD 113	Intro to Prog & Logic	
SGD	116	Graphic Design Tools3		SGD Programmingn Requirements	
SGD	171	Flash SG Programming3	Completio	n Requirements	16 Credit Hours
SGD	174	SG Level Design3			
SGD	212	SGD Design II3	Fundar	nentals I for Simula	tion and Game
SGD	285	Software Engineering3			
Grad	uation	Requirements46 Credit Hours	Develo	pment Certificate -	C2545UD
		•			
N/1	ما:اما	a and Animation Dinlama	SGD 111	Introduction to SGD	3
IVIO	aeiin	g and Animation Diploma -	SGD 112	SGD Design	
D25	450	В	SGD 116	Graphic Design Tools	
			002	Elective	
Gene	ral Ed	ucation Courses			
<b>ENG</b>	111	Expository Writing 3	Electives		
		Math Elective 3	(Select 3.0	hours from the following course	es)
			CIS 115	Intro to Prog & Logic	
Math	Electiv	ve	SGD 117	Art for Games	
(Sele	ct 3.0 h	nours from the following courses)	Graduation	n Requirements	
MAT	121	Algebra/Trigonometry I3		•	
MAT	161	College Algebra3	<b>F</b>		-1:
MAT	171	Precalculus Algebra3	Fundar	nentals II for Simula	ation and
		•	Game [	Development Certifi	cate - C25450F
Majo	r Cour	ses	Juino .	o roto pinoni oo tiin	
SGD	111	Introduction to Simulation and Game Development3			
SGD	112	SGD Design3	SGD 114	3D Modeling	3
SGD	114	3D Modeling 3	SGD 163	SD Documentation	3
SGD	116	Graphic Design Tools3	SGD 212	SGD Design II	3
SGD	117	Art for Games3		Elective	3
SGD	162	SG 3D Animation3			
SGD	164	SG Audio/Video3	Electives		
SGD	165	SG Character Development3		hours from the following cou	
SGD	166	SG Physiology/Kinesis3	CSC 134	C++ Programming	3
SGD	212	SGD Design II3		JAVA Programming	
SGD	214	3D Modeling II 3	SGD 113	SGD Programming	3
SGD	237	Rigging 3D Models3	Graduation	n Requirements	12 Credit Hours
SGD	244	3D Modeling III			
Grad	uation	Requirements45 Credit Hours	Ouglity	Assurance for Sim	ulation and
			•	Assurance for Sim	
Mod	halin	g and Animation Certificate -	Game I	Development Certifi	cate - C25450F
		<del>-</del>		-	
C25	5450 <i>i</i>	A	SGD 134	SG Quality Assurance	2
SGD	111	Introduction to SGD	SGD 134	SG Level Design	
SGD	114	3D Modeling 3	3GD 174	Elective I	
SGD	162	SG 3D Animation3	<del></del>	Elective II	
SGD	165	SG Character Development 3	<del></del>	LICOUVE II	
SGD		3D Modeling II	Elective I		
Comp	pletion	Requirements 15 Credit Hours		hours from the following cou	ireae)
			(36,601,334	Adv C++ Programming	urses)
D	al 4	tion Contificate COEAEOD	CSC 254	Adv C++ Programming Adv JAVA Programming	ა
Pro	auct	tion Certificate - C25450B			
SGD	444	Introduction to CCD	3GD 214	3D Modeling II	
SCD		Introduction to SGD3		ŭ	
300	111 112	SGD Design3	Elective !!	· ·	
SGD	112	SGD Design	Elective II	hours from the fallenting and	
	112 158 159	SGD Design3	(Select 3.0	hours from the following cou	urses)

SGD 162 SG 3D Animation 3  Graduation Requirements	site development and design. Studies will provide opportunity for students to learn related industry standards.
	Graduates should qualify for career opportunities as designers,
<b>Business for Simulation and Game</b>	administrators, or developers in the areas of web applications,
Development Certificate - C25450G	websites, web services, and related areas of distributed computing.
	Web Technologies Degree - A25290
Elective I	
SGD 164 SG Audio/Video	General Education Courses ENG 111 Expository Writing3
Elective II	
	Communication Elective
Elective I	Humanities/Fine Arts Elective
(Select 3.0 hours from the following courses)	Social/Behavioral Science Elective
SGD 285 SG Software Engineering	Oodiai/Beriavioral Coloride Elective
SGD 165 SG Character Development	Humanities/Fine Arts Elective
	(Select 3.0 hours from the following courses)
Elective II	HUM 115 Critical Thinking3
(Select 3.0 hours from the following courses)	HUM 230 Leadership Development3
DBA 110 Database Concepts	
SGD 167 SG Ethics	Mathematics Elective
SGD 168 Mobile SG Programming I	(Select 3.0 hours from the following courses)
SGD 237 Rigging 3D Models	MAT 151 Statistics I
SGD 244 3D Modeling III	MAT 151A Statistics   Lab
SGD 271 Adv Flash Programming	MAT 161 College Algebra
SGD 274 SG Level Design II3	MAT 161A College Algebra Lab
SGD 135 Serious Games	MAT 121 Algebra/Trigonometry3
SGD 159 SGD Production Management	Communication Elective
SGD 268 Mobile SG Programming II	(Select 3.0 hours from the following courses)
Graduation Requirements 12 Credit Hours	COM 120 Intro Interpersonal Communication
	COM 231 Public Speaking
Programming for Simulation and Camp	OOM 201 1 ubile opeaking
Programming for Simulation and Game	Social/Behavioral Science Elective
Development Certificate - C25450H	(Select 3.0 hours from the following courses)
·	ECO 252 Prin. of Macroeconomics
Programming Elective	PSY 150 General Psychology 3
Advanced Programming Elective	, 3,
SGD Programming Electives	Business Electives
COD i regiuming Electives	(Select 3.0 hours from the following courses)
Programming Elective	BUS 110 Introduction to Business
(Select 3.0 hours from the following courses)	BUS 137 Principles of Management3
CSC 134 C++ Programming	BUS 151 People Skills
CSC 151 JAVA Programming 3	CTS 115 Info Sys Business Skills
ů ů	Halan Ossman
Advanced Programming Elective	Major Courses
(Select 3.0 hours from the following courses)	CIS 115 Introduction to Programming and Logic
CSC 234 Adv C++ Programming	NET 110 Networking Concepts
CSC 151 Adv JAVA Programming	WEB 110 Internet/Web Fundamentals
COC 101 Adv DAVA i Togramming	WEB 115 Web Markup and Scripting
SGD Programming Electives	WEB 125 Mobile Web Design
(Select 6.0 hours from the following courses)	WEB 140 Web Development Tools
SGD 168 Mobile SGD Programming I	WEB 182 PHP Programming
SGD 171 Flash SG Programming	WEB 187 Prog for Mobile Devices
SGD 271 Adv Flash Programming	WEB 210 Web Design3
SGD 268 Mobile SG Programming II	WEB 213 Internet Marketing & Analytics
SGD 285 SG Software Engineering	WEB 250 Database-Driven Websites3
Graduation Requirements 12 Credit Hours	WEB 287 Web E-Portfolio
•	
WED TECHNICI COIES	Major Electives List 1
WEB TECHNOLOGIES	Select 3 hours from the following courses
The Web Technologies curriculum prepares graduates for careers in	GRD 141 Graphic Design4
the information technology arena using computers and distributed	WEB 111 Introduction to Web Graphics3
computing to disseminate and collect information via the web.	WEB 180 Active Server Pages
	WEB 211 Advanced Web Graphics3
Course work in this program covers the terminology and use of	WEB 215 Advanced Markup and Scripting3
computers, network devices, networks, servers, databases,	-
applications, programming languages, as well as web applications,	

Major Electives List 2	iOS Application Developer Certificate -
Select 3 hours from the following courses	· · · · · · · · · · · · · · · · · · ·
CSC 151 Java Programming3	C25290D
WEB 120 Introduction to Internet Multimedia	-Day and Online
WEB 225 Content Management Systems	This Certificate covers the development of apps for Android devices.
Major Electives List 3	CIC 11E Introduction to Programming and Logic 2
Select 2 hours from the following courses COE 112 Co-Op Work Experience I	\CIS 115 Introduction to Programming and Logic3 WEB 251 Mobile Applications Dev II
WEB 211 Advanced Web Graphics	SGD 268 Mobile SG Programming II
WEB 260 E-Commerce Infrastructure	WEB 141 Mobile Interface Design3
TYED 200 E COMMOOD MINGGEOGRAP	SGD 168 Mobile SG Programming I
Major Electives List 4	SGD 112 SG Design3
Select 3 hours from the following courses	Completion Requirements18 Credit Hours
WEB 214 Social Media3	
WEB 215 Advanced Markup and Scripting 3 Graduation Requirements 70 Credit Hours	Web Designer Certificate - C25290C  -Day and Online
Mobile Content Development Diploma -	
·	Using industry standard technologies to design and develop
D25290	functioning e-commerce sites for the global marketplace. Students will learn XHTML, PHP, JavaScript, MySQL and
<ul> <li>Day and Online</li> </ul>	ASP.net.
TI MIT O LUB II UST	
The Mobile Content Development Diploma covers the developing of	WEB 110 Internet/Web Fundamentals
mobile content, both apps (applications) and websites. Focus is on	WEB 111 Introduction to Web Graphics
iOS and Android operating systems.	WEB 125 Mobile Web Design
Communication Elective3	WEB 140 Web Development Tools
Math Elective	WEB 211 Advanced Web Graphics
	Completion Requirements 18 Credit Hours
Mathematics Elective	Completion (Coquitorionicinalisminisminisminisminisminisminisminismi
(Select 3.0 hours from the following courses)	W I D I O (17) ( 0050004
MAT 121 Algebra/Trigonometry3	Web Developer Certificate - C25290A
MAT 151 Statistics I3	<ul> <li>Day and Online</li> </ul>
MAT 151A Statistics   Lab1	
MAT 161 College Algebra	This certificate will prepare students to develop web sites using
MAT 161A College Algebra Lab1	industry standard scripting and programming. Students will learn XHTML, PHP, JavaScript, ASP.Net and XML.
Communication Elective	ATTIME, I'III', Savascript, Asi .ivet and Ame.
(Select 3.0 hours from the following courses)	WEB 110 Internet/Web Fundamentals
ENG 111 Expository Writing3	WEB 115 Web Markup and Scripting
COM 120 Intro Interpersonal Communication	WEB 180 Active Server Programming
COM 231 Public Speaking3	WEB 182 PHP Programming3
	WEB 215 Adv. Markup and Scripting
Major Electives	WEB 225 Content Management Systems
CSC 151 JAVA Programming	Completion Requirements 18 Credit Hours
SGD 168 Mobile SG Programming I	
WEB 110 Internet/Web Fundamentals	Advanced Web Developer Certificate -
WEB 111 Introduction to Web Graphics	C25290F
WEB 115 Web Markup and Scripting3	
WEB 125 Mobile Web Design	<ul> <li>Day and Online</li> </ul>
WEB 140 Web Development Tools	This certificate teaches advanced Web Developer concepts.
WEB 141 Mobile Interface Design	This definition to develope advantage web beveloper contestion.
WEB 151 Mobile Application Dev I	DBA 110 Database Concepts3
WEB 187 Prog for Mobile Devices	WEB 140 Web Development Tools
WEB 251 Mobile Applications Dev II	WEB 187 Prog for Mobile Devices
Completion Requirements42 Credit Hours	WEB 250 Database Driven Websites3
Au local Augustana Au dei a Antonom	WEB 260 E-Commerce Infrastructure
Android Application Certificate - C25290E  – Day and Online	Completion Requirements15 Credit Hours
This Certificate covers the development of apps for iOS devices.	
CIS 115 Introduction to Programming and Logic	
CSC 151 JAVA Programming 3	
WEB 141 Mobile Interface Design	
WEB 151 Mobile Application Dev I	
Completion Requirements12 Credit Hours	

#### **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 <u>WebAdvisor</u> for the availability of classes. Click to see a list of Wake Tech's programs that can be completed fully <u>online</u>.

Program Name	Program Code
Associate Degree Nursing – AAS Degree	A45110
Associate Degree Nursing (LPN to RN Advanced Placement 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 – <i>Diploma</i> *	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

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

DIO

General	Education	Courses
---------	-----------	---------

BIO	168	Anatomy and Physiology I	4
BIO		Anatomy and Physiology II	
ENG	111	Expository Writing	
ENG	112	Argument-Based Research	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
		Humanities/Fine Arts Flective	

#### **Major Courses**

Gradi	uation	Requirements	72 Credit Hours
NUR	213	Complex Health Concepts	10
NUR	212	Health System Concepts	5
NUR	211	Health Care Concepts	5
NUR	114	Holistic Health Concepts	5
NUR	113	Family Health Concepts	5
NUR	112	Health-Illness Concepts	
NUR	111	Introduction to Health Concepts.	8
BIO	175	General Microbiology	3
BIO	155	Nutrition	

#### Associate Degree Nursing - A45110 LPN to RN - Advanced Placement Option

#### **General Education Courses** Anatomy and Dhygialagy I

ыО	100	Anatomy and Physiology I	. 4
BIO	169	Anatomy and Physiology II	. 4
		Expository Writing	
<b>ENG</b>	112	Argument-Based Research	. 3
PSY	150	General Psychology	. 3
PSY	241	Developmental Psychology	. 3
		Humanities/Fine Arts Elective	. 3
	_		

#### **Major Courses**

BIO 1	55 N	Nutrition	3
BIO 17	75 (	General Microbiology	3
NUR 1	14 H	Holistic Health Concepts	5
NUR 2	12 F	Health System Concepts	5
NUR 2	13 (	Complex Health Concepts	10
NUR 2	14 N	Nursing Transition	4
	L	Licensed Practical Nurses Advanced Placement	
	(	Option Credits	19
Graduat	Graduation Requirements 72 Credit Hours		

#### COMPUTED TOMOGRAPHY **TECHNOLOGY**

The Computed Tomography Technology curriculum prepares the individual to use specialized equipment to visualize cross-sectional anatomical structures and aid physicians in the demonstration of pathologies and disease processes. Individuals entering this curriculum must be registered or registry- eligible radiologic technologists, radiation therapists, or nuclear medicine technologists.

Course work prepares the technologist to provide patient care and perform studies utilizing imaging equipment, professional communication, and quality assurance in scheduled and emergency procedures through academic and clinical studies.

Graduates may be eligible to sit for the American Registry of Radiologic Technologist Advanced-Level testing in Computed Tomography examination. They may find employment in facilities which perform these imaging procedures.

#### **Computed Tomography Technology** Certificate - C45200

#### **Major Courses**

Com	oletion	Requirements 18	B Credit Hours
		CT Exam Prep	
CAT	226	CT Clinical Practicum	6
CAT	224	CT Clinical Practicum	4
CAT	211	CT Procedures	4
CAT	210	CT Physics and Equipment	3

#### **DENTAL ASSISTING**

The Dental Assisting curriculum prepares individuals to assist the dentist in the delivery of dental treatment and to function as integral members of the dental team while performing chairside and related office and laboratory procedures.

The Dental Assisting Program at Wake Technical Community College is accredited by the American Dental Association and therefore a graduate is classified as a DA II by the North Carolina State Board of Dental Examiners. The student may also be eligible to take the General Chairside Exam in order to be a Certified Dental Assistant (CDA). As a Dental Assistant II (DAII), defined by the Dental Laws of North Carolina, graduates can perform identified expanded functions including coronal polishing.

Course work includes instruction in general studies, biomedical sciences, dental sciences, clinical sciences, and clinical practice. A combination of lecture, laboratory or pre-clinical, and clinical experiences provide the students with knowledge in infection/hazard control, radiography, dental materials, preventive dentistry, and clinical procedures. The students receive their hands-on patient care clinical experience with rotations at the UNC School of Dentistry, Wake County Human Services-Dental Clinic, and private general and specialty dental practices within Wake County.

#### **Dental Assisting Diploma- D45240**

#### **General Education Courses**

BIO	106	Introduction to Anatomy/	
		Physiology/Microbiology	3
COM	120	Interpersonal Communication	3
<b>ENG</b>	111	Expository Writing	3
PSY	118	Interpersonal Psychology	

Major	Cours	es	
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
Gradu	ation I	Requirements	

#### **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 PSY 150 General Psychology......3 SOC 210 General, Organic and Biochemistry...... 3 CHM 130 COM 120 **Major Courses** BIO Basic Anatomy......5 163 BIO 175 General Microbiology ...... 3 DEN 110 Orofacial Anatomy ...... 3 Infection/Hazard Control .......2 DEN 111 DEN 112 Dental Radiography ...... 3 DEN 120 DEN 121 Dental Hygiene Preclinic Lab ......2 Nutrition and Dental Health ......2 DEN 123 DEN 124 Periodontology......2 Dental Office Emergencies......1 DEN 125 DEN 130 Dental Hygiene Theory I ......2 DEN 131 Dental Hygiene Theory II......1 DEN 140 DEN 141 Dental Hygiene Clinic II......2 Dental Hygiene Theory III......2 DEN 220 DEN 221 Dental Hygiene Clinic III......4 General and Oral Pathology......2 DEN 222 DEN 223 Dental Pharmacology......2 Materials and Procedures ......2 DEN 224 DEN 230 Dental Hygiene Theory IV ...... 1 231 Dental Hygiene Clinic IV ......4 DEN Community Dental Health ......3 232 DFN 233 DEN Professional Development ......2

## EMERGENCY MEDICAL SCIENCE

The Emergency Medical Science curriculum is designed to prepare graduates to enter the workforce as paramedics. Additionally, the

Graduation Requirements.......73 Credit Hours

program can provide an Associate Degree for individuals desiring an opportunity for career enhancement.

The course of study provides the student an opportunity to acquire basic and advanced life support knowledge and skills by utilizing classroom instruction, practical laboratory sessions, hospital clinical experience, and field internships with emergency medical service agencies.

Students progressing through the program may be eligible to apply for both state and national certification exams. Employment opportunities include emergency medical service, fire and rescue agencies, air medical services, specialty areas of hospitals, industry, educational institutions, and government agencies.

### Emergency Medical Science Degree - A45340

General	Education Courses
BIO 16	3 Anatomy and Physiology5
COM 12	O Interpersonal Communication3
ENG 11	
MAT 11	0 Mathematical Measurement3
PSY 15	
	Humanities/Fine Arts Elective3
Major Co	
EMS 11	2
EMS 12	
EMS 12	
EMS 12	
EMS 23	
EMS 13	
EMS 13	. ,
EMS 14	
EMS 15	
EMS 21	
EMS 22	
EMS 22	
EMS 23	
EMS 23	
EMS 24	
EMS 24	
EMS 25	
EMS 26	- / tarancea maana =generee
EMS 27	
EMS 28	
Graduati	on Requirements73 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**

ENG 111 Expository Writing......3

General Education Requirements (15 to 18 Credits)

- Day, Evening

One of the following ENG courses:

ENG		Argument-Based Research	
	113	Literature-Based Research	
ENG	114	Professional Research and Reporting	3
_			
		llowing BIO courses:	_
BIO	106	Introduction to Anatomy/Physiology/Microbiology	
BIO	161	Introductory to Human Biology	
BIO	163	Basic Anatomy and Physiology	
BIO	165	Anatomy and Physiology I	4
One o	of the fo	llowing PSY courses:	
PSY	110	Life Span Development	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
Ono	of the fe	llowing Humanities/Fine Arts courses:	
HUM		Technology and Society	3
HUM		Critical Thinking	
PHI	240	Introduction to Ethics	
			0
Othe	Cours	se Requirements (46 to 49 Credits)	
Selec	t from	the following list. Do not select courses taken t	0
		Seneral 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	
BIO	161	Introductory to Human Biology	3
BIO	163	Basic Anatomy and Physiology	
BIO	165	Anatomy and Physiology I	
BIO	166	Anatomy and Physiology II	4
BIO	175	General Microbiology	
BIO	271	Pathophysiology	3
CHM		General, Organic, and Biochemistry	3
CHM	131	Introduction to Chemistry	
CHM	151	General Chemistry	
CIS	110	Introduction to Computers	
CIS	111	Basic PC Literacy	2
COM		Interpersonal Communication	3
COM		Public Speaking Mathematical Measurement	პ
MAT	110		
MAT	115	Mathematical Models	
MAT MAT	161 161A	College Algebra  College Algebra Lab	ک د
OST	141 142	Medical Terms I – Medical Office Medical Terms II – Medical Office	ა ი
OST	–	Medical Legal Issues	
OST	149 241	Medical Office Transcription I	
PSY	110	Life Span Development	
PSY	118	Interpersonal Psychology	ر د
PSY	150	General Psychology	
PSY	241	Developmental Psychology	
PSY	281	Abnormal Psychology	ა
SOC	210	Introduction to Sociology	
SOC	213	Sociology of the Family	
SOC	220	Social Problems	
		Requirements64 Credit Hou	ırs

## 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

Gene	ral Edu	cation Courses	
ACA	111	College Student Success	1
COM OR	120	Intro to Interpersonal Communication	3
COM	231	Public Speaking	3
ENG		Expository Writing	
HUM PSY	115 150	Critical Thinking	
MAT ·	115	Mathematical Models	3
MAT and	161	College Algebra	3
MAT	161A	College Algebra	1
Major	Cours	es	
BIO	155	Nutrition	3
BIO	168	Anatomy and Physiology I	4
BIO	169	Anatomy and Physiology II	4
HEA	112	First Aid & CPR	
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	
PSF	120	Group Exer Instruction	
PSF	210	Personal Training	
PSF	212	Exercise Programming	3
PSF	218	Lifestyle Chng & Wellness	4
		Other Major Hours3	4
Gradu	uation F	Requirements68-70 Credit Hour	s

## 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

Gene	ral Edu	cation Courses	
BIO	161	Introduction to Human Biology	. 3
CIS	110	Introduction to Computers	. 3
ENG	111	Expository Writing	
ENG	114	Professional Research and Report Writing	. 3
PSY	150	General Psychology	. 3
PSY	241	Developmental Psychology	. 3
PSY		Abnormal Psychology	. 3
SOC	213	Sociology of Family	. 3
		Humanities/Fine Arts Elective	. 3
•	r Cours		
COE		Co-op Work Experience I	. 1
COE		Work Experience Seminar I	. 1
GRO	. — -	Gerontology	. 3
HSE		Introduction to Human Services	
HSE	112	Group Process I	
HSE	123	Interviewing Techniques	
HSE	125	Counseling	
HSE	127	Conflict Resolution	
HSE	135	Orientation Lab I	
HSE	210	Human Services Issues	
HSE		Case Management	
HSE		Crisis Intervention	
HSE		Stress Management	. 3
SAB		Substance Abuse Overview	
SWK	113	Working with Diversity	. 3
Maior	Electi	es.	
		rs from the following courses	
HSE		Child Abuse and Neglect	3
	227	Child & Adolescence in Crisis	. 3
	251	Activity Planning	
	110		. 3
		Requirements67 Credit Hou	

# 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

Gene	ral Edu	ucation Courses	
BIO	161	Introduction to Human Biology	3
CIS	110	Introduction to Computers	3
<b>ENG</b>	111	Expository Writing	
<b>ENG</b>	114	Professional Research and Report Writing	3
PSY	150	General Psychology	3
PSY	241	Developmental Psychology	3
PSY	281	Abnormal Psychology	3
SOC	213	Sociology of Family	
		Humanities/Fine Arts Elective	
Maior	Cours	ses	
COE		Co-op Work Experience I	1
COE		Work Experience Seminar I	1
HSE	110	Introduction to Human Services	
HSE	112	Group Process I	2
HSE	123	Interviewing Techniques	
HSE	125	Counseling	
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	
SAB	125	SAB Case Management	3
SAB	135	Addictive Process	3
SAB	210	Substance Abuse Counseling	
SAB	220	Group Techniques/Therapy	
SAB	240	SAB Issues in Client Services	3
SWK		Working with Diversity	
Gradi	uation	Requirements70 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**

Com	oletion	Requirements	14 Credit Hours
SAB	240	Substance Abuse Issues	3
SAB	210	Substance Abuse Counseling	3
SAB	135	Addictive Process	3
		Intake and Assessment	
HSE	112	Group Processes I	2

#### 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

Gene	ral Edι	ucation Courses	
<b>ENG</b>	111	Expository Writing	3
CIS	111	Basic PC Literacy	2
MAT	110	Mathematical Measurement	3
Major	Cours		
BIO	161	Intro to Human Biology	3
MED	110	Orientation to Medical Assisting	1
MED	118	Medical Law and Ethics	
MED	121	Medical Terminology I	3
MED	122	Medical Terminology II	
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
Gradu	ation	Requirements48 Cre	dit 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.

### Additional Courses Required for the Medical Assisting Degree – A45400

Additional Maj	or Courses
MED 232	Medical Insurance Coding2
MED 270	Symptomatology 3
MED 272	Drug Therapy 3
MED 274	Diet Therapy/Nutrition 3
Additional Ger	eral Education Courses
SPA 120	Spanish for the Workplace3
	Humanities/Fine Art elective 3
Choose one:	
Choose one: ENG 112	Argument-Based Research3
	Literature Based Research3
ENG 112 ENG 113 ENG 114	Literature Based Research3 Professional Research and Reporting3
ENG 112 ENG 113 ENG 114 COM 120	Literature Based Research
ENG 112 ENG 113 ENG 114	Literature Based Research3 Professional Research and Reporting3
ENG 112 ENG 113 ENG 114 COM 120	Literature Based Research

SOC	210	Introduction to Sociology	3
Gradu	uation	Requirements	

## 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

### **A45420**-Day

Gene	ral Edu	cation Courses		
<b>ENG</b>	111	Expository Writing3		
<b>ENG</b>	112	Argument-Based Research3		
MAT	115	Mathematical Models3		
PSY	150	General Psychology3		
		Humanities/Fine Arts Elective3		
Major	Cours	es		
BIO	163	Basic Anatomy and Physiology5		
CIS	111	Basic PC Literacy2		
MLT	110	Introduction to MLT3		
MLT	111	Urinalysis and Body Fluids2		
MLT	115	Laboratory Calculations2		
MLT	118	Medical Lab Chemistry3		
MLT	120	Hematology/Hemostasis I4		
MLT	125	Immunohematology I5		
MLT	130	Clinical Chemistry I4		
MLT	140	Introduction to Microbiology3		
MLT	217	Professional Issues1		
MLT	220	Hematology/Hemostasis II3		
MLT	230	Clinical Chemistry II3		
MLT	240	Special Clinical Microbiology3		
MLT	254	MLT Practicum I4		
MLT	266	MLT Practicum II6		
MLT	276	MLT Practicum III6		
MLT	280	Special Practice Lab1		
Gradu	Graduation Requirements75 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

Gene	eral Ec	ducation Courses			
<b>ENG</b>	111	Expository Writing	3		
Huma	Humanities/Fine Arts Elective				
Мајо	r Cou	rses			
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			
MRI	216	MRI Instrumentation	2		
MRI	217	MRI Physics I			
MRI	218	MRI Physics II			
MRI	241	MRI Anatomy and Path I			
MRI	242	MRI Anatomy and Path II	2		
MRI	250	MRI Clinical Ed I			
MRI	260	MRI Clinical Ed II	7		
MRI	270	MRI Clinical Ed III	8		
MRI	271	MRI Capstone			
Com	pletio	n Requirements 45 Cred			

#### 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

MTH

125

#### 

PSY O		Interpersonal Psychology	3
PSY	150	General Psychology	3
Major	Cours	es	
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	
MTH	121	Clinical Supplement I	1
			_

Ethics of Massage......2

MTH	130	Therapeutic I	Massage	Mgmt		2
Gradu	ation	Requirements			10 Credit	Hours

#### PHARMACY TECHNOLOGY

The Pharmacy Technology Program prepares individuals to become pharmacy technicians. These allied health professionals assist and support licensed pharmacists in providing medications and other health care products to patients. Pharmacy technicians maintain patient's records; fill prescriptions; maintain inventories; set up, package, and label medication doses; prepare solutions and intravenous additives; and perform clerical duties, including insurance forms and forms required by third-party payers. Students will obtain a broad knowledge of the actions and uses of drugs, pharmacology, pharmaceutical calculations, anatomy and physiology, drug delivery systems, pharmacy administration, medical terminology and abbreviations through the course work. Through the simulated pharmacy technology laboratory activities and the clinical experiences, students will increase their management, organizational, interpersonal, customer relations, computer and communication skills as well as their skills in performing pharmacy-related functions. The clinical practice will take place in medical centers and retail pharmacies. The Pharmacy Technology Program has been designed to meet the accreditation standards of the American Society of Health-System Pharmacists.

Graduates may be employed in hospitals, nursing homes, private and chain drug stores, research laboratories, wholesale drug companies, and pharmaceutical manufacturing facilities. Graduates will qualify to take the National Certification Examination developed by the Pharmacy Technician Certification Board.

The Pharmacy Technology program is a collaborative program offered by Johnston Community College and Wake Technical Community College.

#### Pharmacy Technology Degree - A45580

#### **General Education Courses** Basic Anatomy and Physiology ......5 BIO 163 CIS 110 Introduction to Computers......3 **ENG** 111 Expository Writing......3 Argument Based Research......3 **ENG** 112 **PSY** 150 General Psychology......3 Humanities Elective ......3 **Major Courses** PHM 110 Introduction to Pharmacy......3 PHM 111 Pharmacy Practice I.....4 $\mathsf{PHM}$ 115 Pharmacy Calculations ......3 Pharmacy Calculations Lab......1 PHM 115A Sterile Products ......4 PHM 118 Pharmacology I......3 PHM 120 PHM 125 Pharmacology II......3 132 Pharmacy Clinical ......2 PHM Pharmacy Clinical ......3 PHM 133 PHM 134 Pharmacy Clinical .....4 $\mathsf{PHM}$ 135 Pharmacy Clinical ......5 PHM 140 Trends in Pharmacy.....2 Hospital Pharmacy.....4 150 PHM PHM 155 Community Pharmacy......3 Pharm Dosage Forms......3 PHM 160 165 Pharmacy Prof Practice ......2 PHM Graduation Requirements...... 69 Credit Hours

Last Updated 10/10/13 171

#### Pharmacy Technology Diploma - D45580

#### **General Education Courses** ENG 111 Basic Anatomy and Physiology ......5 RIO 163 **Major Courses** Introduction to Pharmacy ...... 3 PHM 110 PHM 111 Pharmacy Calculations ...... 3 PHM 115 PHM 115A Pharmacy Calculations Lab.....1 PHM Sterile Products......4 118 PHM 120 PHM 125 PHM 132 PHM Pharmacy Clinical ...... 4 134 PHM 140 Trends in Pharmacy......2 Community Pharmacy......3 PHM 155 165 Pharmacy Prof Practice ......2 PHM

#### 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 1	100	Phlebotomy Technology	6					
		Phlebotomy Practicum						
Choose one of the following:								
PSY 1	118	Interpersonal Psychology	3					
PSY 1	150	General Psychology	3					
Comple	etion I	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

-Dav

General Education Courses								
BIO	163	Basic Anatomy and Physiology						
ENG	111	Expository Writing						
ENG	–	Argument-Based Research						
HUM		Critical Thinking						
PSY	150	General Psychology						
MAT	115	Mathematical Models	3					
	or							
MAT	140	Survey of Mathematics	3					
	and							
MAT	140A	Survey of Mathematics Lab	1					
Major	Cours	one.						
RAD		Radiography Introduction and Patient Care	3					
RAD		Radiographic Procedures I	ر ا					
RAD		Radiographic Procedures II	<b>7</b>					
RAD	–	Radiographic Imaging I	<b>⊤</b>					
RAD	. — .	Radiographic Imaging I	o					
RAD		Radiographic Physics I	2					
RAD		Radiographic Clinical Education I	2					
RAD		Radiographic Clinical Education II						
RAD	171	Radiographic Clinical Education III						
RAD	211	Radiographic Procedures III						
RAD	231	Radiographic Physics II	2					
RAD	241	Radiobiology/Protection	2					
RAD	245	Image Analysis	2					
RAD	251	Radiographic Clinical Education IV						
RAD	261	Radiographic Clinical Education V						
RAD	271	Radiography Capstone						
Graduation Requirements:								
			,					

#### 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 Expository Writing......3 BIO 163 Basic Anatomy and Physiology .....5 **Major Courses** SUR 110 Introduction to Surgical Technology ......3 SUR Preoperative Patient Care......7 111 SUR 122 Surgical Procedures I......6 SUR 123 Clinical Practice I ......7 Surgical Procedures II......5 SUR 134 SUR 135 Clinical Practice II ......4 SUR 137 Professional Success Preparation ..... Graduation Requirements...... 41 Credit Hours

Last Updated 10/10/13 172

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)		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	
APPLY FOR DIPLOMA IN ARTS Minimum 4	4 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.

<sup>\*</sup>Note\* 4-semester outline based upon no pre-requisites classes required.

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 <u>General Education Core courses</u> for the AFA degree and a list of <u>Transferrable courses</u> 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		Social/Behavioral Science	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
Students must choose 3 courses in Behavioral/Social Sciences. One must be a HISTORY; the 3 courses must be from 3 different disciplines	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	
		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.

<sup>\*</sup>Note\* 4-semester outline based upon no pre-requisite classes required.

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 <u>General Education Core courses</u> for the AFA degree and a list of <u>Transferrable courses</u> 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	or 141 1 MUS-152P		1
MUS-151P		MUS-132, 134, or 142	1
WIOS-191F	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		MUS-262	2
Behavioral/Social Sciences. One must be a HISTORY; the 3 courses must be from 3 different disciplines	3	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	Out in I/D all a devel Out a second	
MUS-231, 233, or 241	1	Social/Behavioral Science	3
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.

<sup>\*</sup>MUS-111 prerequisite or placement

<sup>\*\*</sup> Audition and interview required for all applied lessons (see website and Program Coordinator for details)
Last Updated 10/10/13

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	3 Select from Mathematics/ Natural Sciences Computer Sciences	
NATURAL SCIENCE	4	Select from Mathematics/ Natural Sciences Computer Sciences	3 (or 4)
Select from Mathematics/ Natural Sciences General Education Core	4	4 Select from list of transferrable courses	
Select from Mathematics/ Natural Sciences General Education Core	4	Select from list of transferrable courses	
APPLY FOR DIPLOMA IN SCIENCESMin credits	imum 44	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.

<sup>\*</sup>Note\* 4-semester outline based upon no pre-requisites classes required.

## COLLEGE/ UNIVERSITY TRANSFER

ASSOCIATE IN	SCIENCE PRE-MAJOI	R:
<b>ENGINEERING</b>	(A.S.)	

Dean Cheryl Keeton Phone: 866-5611

Email: <a href="mailto:clkeeton@waketech.edu">clkeeton@waketech.edu</a>

# Associate In Science (A.S.) Degree Pre-Major: Engineering A1040d

#### OFFICIAL CURRICULUM SCHEDULE

COURSE REQUIREMENTS	CREDIT HOURS
Composition ENG 111 ENG 112 or ENG 113 or ENG 114	6
Humanities/Fine Arts	
Select 2 additional courses from 2 of the following areas:	ng discipline
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 HIS 111, 112, 121, 122, 131, 132.	e following:
Select 2 additional courses from two of the foll areas:	lowing discipline
ANT 210 ECO 251, 252 (One ECO course is recomm GEO 111, 112 POL 110, 120, 210 PSY 150 SOC 210, 213, 220, 225	ended.)
Natural Sciences  The following courses are required:  CHM 151  PHY 251  PHY 252	12
Mathematics The following courses are required: MAT 271 and MAT 272	8

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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
```

## **GENERAL EDUCATION**

## **GENERAL EDUCATION**

Dean Laura Kalbaugh Phone: 919-866-5304

Email: <a href="mailto:lmkalbaugh@waketech.edu">lmkalbaugh@waketech.edu</a>

## Associate In General Education (A.G.E.) - A10300

#### **OFFICIAL CURRICULUM SCHEDULE**

CC	OURSE REQUIREMENTS	CREDIT HOURS
	English/Communications ENG 111 Expository Writing ENG 114 Professional Research and	3
	Humanities/Fine ArtsSelect from courses in art, foreign langulumanities, literature, music, philosophyreligion.	uage,
	Social/Behavioral Sciences Select from courses in economics, histo political science, psychology, and socio	ory,
	Natural Sciences/Mathematics Select from courses in biology, chemist geology, physics, and mathematics.	-
	Computer ScienceCIS 111 Basic PC Literacy (1 2 2)	2

Select from associate degree level courses in English/communications, humanities/fine arts, social/behavioral sciences, and natural sciences/ mathematics, or any specialty courses as selected by the student and approved by the student's advisor.

Electives......47

Graduation Requirements ...... 64 Credit Hours

#### **Associate In General Education**

The Associate in General Education (AGE) curriculum is designed for individuals wishing to broaden their education, with emphasis on personal interest, growth and development. The two-year General Education program provides students opportunities to study English, literature, fine arts, philosophy, social science, science and mathematics.

Many of the courses are equivalent to college transfer courses; however, the program is not principally designed for college transfer. Courses must be at the 110-199 or 210-299 level. Within the degree program, the college shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic use of computers.

#### **Vocational and Technical Instructors' Option**

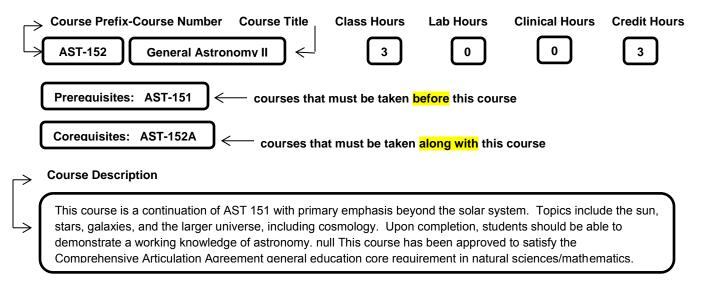
This option is designed for teachers of vocational and technical programs in technical colleges, trade schools, high schools, and similar institutions, as well as for practitioners of specific vocations. In addition to completing the core requirements for the Associate in General Education degree, the student may receive credit for previous training, experience, and formal study in the student's area of specialization. A maximum of sixteen hours of elective credit may be granted as follows:

- Sixteen semester hours of credit for full-time trade school instruction (twelve months/1440 hours) in one special skilled area. Certified by transcript, diploma, or letter from trade school. Maximum sixteen semester hours of credit.
- II. One semester hour of credit per ninety hours of fulltime trade school instruction for programs of less than one-year duration. Certified by transcript, diploma, or letter from trade school. Maximum sixteen semester hours of credit.
- III. One semester hour of credit per sixty hours of special short course instruction by a companysponsored school. Certified by diploma, certificate, or letter from company school. Maximum three semester hours of credit.
- IV. Three semester hours of credit for a full year of employment (outside of Wake Technical Community College) in a situation where teaching was the primary employment. Maximum three semester hours of credit.
- V. Five semester hours of credit for each full year of employment at Wake Technical Community College with teaching the specialty courses as the primary responsibility. Maximum fifteen semester hours of credit.
- VI. One semester hour of credit for each full year of employment in the specialty occupation qualified to teach. Maximum five semester hours of credit.

Credits earned in industrial and/or vocational programs offered by regionally-accredited, collegiate-level institutions are acceptable in meeting requirements in the area of specialization.

The student will be required to provide sufficient documentation to substantiate the suitability of previous training, experience, and formal study for credit.

#### All courses are identified by the following example:



#### **ACADEMIC RELATED (ACA Prefix)**

**ACA-090** Study Skills 3 0 0 3

Prerequisites:

Corequisites:

This course is intended for those who placed into credit-level course work but who are not maintaining satisfactory academic progress toward meeting program goals. Topics include study skills, note taking, learning styles and strategies, test taking, goal setting, and self-assessment skills. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

ACA-111 College Student Success 1 0 0 1

Prerequisites:

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-115** Success & Study Skills 0 2 0 1

Prerequisites:

Corequisites:

This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

ACA-118 College Study Skills 1 2 0 2

Prerequisites:

Corequisites:

This course covers skills and strategies designed to improve study behaviors. Topics include time management, note taking, test taking, memory techniques, active reading strategies, critical thinking, communication skills, learning styles, and other strategies for effective learning. Upon completion, students should be able to apply appropriate study strategies and techniques to the development of an effective study plan.

**ACA-120** Career Assessment 1 0 0 1

Prerequisites: 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-122 College Transfer Success 1 0 0 1

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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 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. null null

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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 1 group; # Take ACC-120(S20278) CIS-110(S21058); # Take ACC-120(S20278)

CIS-111(S21059); 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 CIS-110(S21058) or CIS-111(S21059);

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.

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ACC-130 Business Income Taxes

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:

Extra:

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 preprogrammed 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

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.

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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-115(S20802););

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) or ACC-120(S10290);

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

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.

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**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-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.

0 **AHR-115** Refrigeration Systems 1 3 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** 3 n Prerequisites: Take AHR-111(S14148) or ELC-111; 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. 2 **AHR-133 HVAC Servicing** 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 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. 2 0 2 **AHR-210 Residential Building Code** 1 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** 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-211 Residential System Design

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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

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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

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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

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Prerequisites:

Take AHR-111(S14148) ELC-111 or ELC-112(S21587);

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

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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

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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

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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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

ANT-220 Cultural Anthropology 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

ANT-221 Comparative Cultures 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

ANT-230 Physical Anthropology 3 0 0 3

Prerequisites: Take 1 group: # Take ENG-090 RED-090: # Take ENG-111:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

ANT-230A Physical Anthropology Lab 0 2 0 1

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**ANT-240 Archaeology** 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**ANT-245 World Prehistory** 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

#### 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; Coreguisites: 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; Coreguisites: 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 their methodologies. Topics include construction terminology, materials and their properties, manufacturing processes, construction techniques, and other related topics. Upon completion, students should be able to detail construction assemblies and identify construction materials and properties.

ARC-113 Residential Architectural Technology 1 6 0 3

Prerequisites: Take ARC-111; Coreguisites: 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(S11752) 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 residential and commercial 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(S20804); #Take ARC-111 MAT-171(S20807);

#Take ARC-111 MAT-175;

Corequisites: SLP-212 SLP-212 SLP-230 SLP-230

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; Coreguisites: 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; Take ARC-111

ARC-112(S11752) ARC-114(S10248);

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-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-235 Architectural Portfolio 2 3 0 3

Prerequisites: Take LAR-223(S22168) or ARC-213(S10726);

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);

Corequisites:

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:

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-111 Art Appreciation** 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

#### ART (ART Prefix)

**ART-113 Art Methods and Materials** 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. 0 3 **ART-114 Art History Survey I** 3 0 Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111; 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. 3 0 **ART-115 Art History Survey II** 0 Take 1 group; # Take ENG-090 RED-090; # Take ENG-111; Prerequisites: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. **ART-116** Survey of American Art Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111; 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. 3 **ART-117 Non-Western Art History** 0 Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111; 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine art. **ART-121 Two-Dimensional Design** 0 3 Prerequisites: 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 twodimensional visual art. **ART-122** 0 3 **Three-Dimensional Design** Prerequisites: 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-130 Basic Drawing**  0

2

Prerequisites:

Corequisites:

This course introduces basic drawing techniques and is designed to increase observation skills. Emphasis is placed on the fundamentals of drawing. Upon completion, students should be able to demonstrate various methods and their application to representational imagery. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**ART-131** Drawing I 6

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Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**ART-132** Drawing II 0

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**ART-135** Figure Drawing I

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** 

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

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Prerequisites:

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-214** Portfolio and Resume 0

0

1

Prerequisites:

Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

Corequisites:

This course covers resume writing, interview skills, and the preparation and presentation of an art portfolio. Emphasis is placed on the preparation of a portfolio of original artwork, the preparation of a photographic portfolio, approaches to resume writing, and interview techniques. Upon completion, students should be able to mount original art for portfolio

presentation, photograph and display a professional slide portfolio, and write an effective resume. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

0

3

ART-222 Wood Design I 0

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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**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:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**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 ENG-080 RED-080:

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 Prerequisites: Corequisites:	Metals I	0	6	0	3
This course intro Emphasis is place	duces basic metal design in traditional and conter ed on designing and fabricating jewelry, small scu pe able to design and produce small art objects.			-	
ART-246 Prerequisites: Corequisites:	Metals II Take ART-245(S11515);	0	6	0	3
This course provi	ides a continuation of metal design utilizing basic ualized design. Upon completion, students shoul				
ART-247 Prerequisites: Corequisites:	Jewelry I	0	6	0	3
This course introduced and techniques u	duces a basic understanding of the design and pr sing metals and other materials. Upon completio methods to create unique jewelry.	-	•	•	•
ART-248 Prerequisites: Corequisites:	<b>Jewelry II</b> Take ART-247;	0	6	0	3
This course is a course that utilize a variety	continuation of the skills learned in ART 247. Empety of techniques such as casting, cloisonne, and welry which demonstrates originality.				
ART-251 Prerequisites:	Weaving I	0	6	0	3
traditional weavir	ides a basic understanding of the design and production gradients. Upon completion, students should niques for the creation of unique woven fabrics.				•
ART-252 Prerequisites: Corequisites:	Weaving II Take ART-251;	0	6	0	3
This course furth on traditional and	ers an exploration of creative design as it relates I experimental methods. Upon completion, stude e techniques for individual expressive designs.	-			
ART-260 Prerequisites: Corequisites:	Photography Appreciation Take 1 group; # Take RED-090 ENG-090; # T	3 Гake ENG-11	0 I1;	0	3
This course intro- composition and produce, using co	duces the origins and historical development of pl history of photography as an art form. Upon com plor transparencies, properly exposed, well-comp apprehensive Articulation Agreement for transferat	pletion, stud	ents sho raphs. n	uld be ab ull This co	le to recognize and ourse has been approve
ART-261 Prerequisites: Coreguisites:	Photography I	0	6	0	3

This course introduces photographic equipment, theory, and processes. Emphasis is placed on camera operation, composition, darkroom technique, and creative expression. Upon completion, students should be able to successfully expose, develop, and print a well-conceived composition.

0 6 0 **ART-262** Photography II 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. 0 **ART-263** 6 0 3 Color Photography 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 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 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. 0 3 **ART-267** Videography II 0 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. 0 **ART-271** 0 3 Computer Art II Prerequisites: Take ART-171(S10922);

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.

Corequisites:

ART-275 Prerequisites:	Introduction to Commercial Art	0	6	0	3
design for advert	duces the materials and techniques used in creative layout design for publication. Emphasis is placed on ising in a variety of techniques and media including computer graphics. Upon completion, students demonstrate competence in manual camera-ready layout design and computer graphics literacy.				
ART-281 Sculpture I 0 6 0 3  Prerequisites: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.					
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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.					
on fundamentals	Ceramics I  ides an introduction to three-dimensional design prin of forming, surface design, glaze application, and fir s in slab and coil construction, simple wheel forms, g	ing. Upon	completio	n, studer	nts should be able to
design, sculptura	Ceramics II Take ART-283; rs advanced hand building and wheel techniques. El quality, and glaze effect. Upon completion, student ence in forming and glazing with a development of the	ts should b	e able to	demonstr	
sequences. Emp	Studio Take 1 group; # Take ENG-090 RED-090; #Take ides the opportunity for advanced self-determined wo chasis is placed on creative self-expression and in-de- ents should be able to create original projects specifi	ork beyond epth explo	the limits	echniques	and materials. Upon
ART-289 Prerequisites:	Museum Study	2	2	0	3

on-site research.

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

#### ASTRONOMY (AST Prefix)

AST-111 Descriptive Astronomy 3 0 0 3

Prerequisites: Take MAT-161(S20916) or MAT-171(S20807);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

AST-111A Descriptive Astronomy Lab 0 2 0 1

Prerequisites: Take MAT-161(S20916) or MAT-171(S20807);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**AST-151 General Astronomy I** 3 0 0 3

Prerequisites: Take MAT-161(S20916) or MAT-171(S20807);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

AST-151A General Astronomy I Lab 0 2 0 1

Prerequisites: Take MAT-161(S20916) or MAT-171(S20807);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

AST-152 General Astronomy II 3 0 0 3

Prerequisites: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

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. null This course is approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

#### 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(S10676);

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

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.

2

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

3

1

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

Prerequisites: Take AUT-161(S21697); Corequisites: AUT-163A AUT-181

This course covers electronic theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of electronics, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.

AUT-163A Advanced Automotive Electricity Lab 0 3 0

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;

Coreguisites: AUT-161B, AUT-163, AUT-163A

This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information.

**AUT-183** Engine Peformance 2 2 6 0 4

Prerequisites: Take AUT-141, AUT-141A, AUT-151AUT-151A, AUT-281, AUT-181Take AUT-181;

Coreguisites: 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 interrelated 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;

Coreguisites: 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
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 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.

#### (BAF Prefix) BAKING AND FINANCE **BAF-143 Financial Planning** 3 0 0 3 Prerequisites: Corequisites: This course covers the perspectives, principles, and practices of financial planning. Topics include investment, retirement, tax, and estate planning. Upon completion, students should be able to understand the process that looks at a customer's financial picture and recommend strategies to achieve the customer's objectives. **BUSINESS ANALYTICS** (BAS Prefix) **BAS-120 Business Analytics I** 3 Take 1 group; # Take ENG-090 RED-090 MAT-080; # Take ENG-111 MAT-080; Prerequisites: 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 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. 3 **BAS-121 Analytics Methods I** 3 0 0 Prerequisites: 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** 2 2 0 3 **Analytics Tools I** 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. 3 **BAS-220 Business Analytics II** 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-220** 3 3 **Business Analytics II** n 0 Prerequisites: Take BUS-110, BAS-120; Corequisites:

business decisions.

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

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. null This course is restricted to diploma and/or certificate programs.

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: # Take DMA-040

ENG-090 RED-090; # Take DMA-040 ENG-111;

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. null null

**BIO-111 General Biology I** 3 3 0 4

Prerequisites: Take 1 group; # Take ENG-090 MAT-070 RED-090; # Take ENG-111 MAT-070; #Take ENG-090

DMA-050 RED-090; # Take ENG-111 DMA-050;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**BIO-112 General Biology II** 3 3 0 4

Prerequisites: Minimum grade C; Take BIO-111;

Corequisites:

This course is a continuation of BIO 111. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

BIO-120 Introductory Botany 3 3 0 4

Prerequisites: Take BIO-110 or BIO-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

BIO-130 Introductory Zoology 3 3 0 4

Prerequisites: Take BIO-110 or BIO-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

BIO-140 Environmental Biology 3 0 0 3

Prerequisites: Take BIO-110 or BIO-111; 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

BIO-140A Environmental Biology Lab 0 3 0 1

Prerequisites: Take BIO-110 or BIO-111; 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**BIO-145 Ecology** 3 3 0 4

Prerequisites: Take BIO-110 or BIO-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

BIO-150 Genetics in Human Affairs 3 0 0 3

Prerequisites: Take BIO-110 or BIO-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

BIO-161 Introduction to Human Biology 3 0 0

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

BIO-165 Anatomy and Physiology I 3 3 0 4

Prerequisites: Take CHM-090;

Corequisites:

Last Updated 10/10/13

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**BIO-168** Anatomy and Physiology I 3 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

3 3 0 **BIO-169** Anatomy and Physiology II 4

Prerequisites: Minimum grade C; Take BIO-168(S11555);

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** Take BIO-110 BIO-111 BIO-163 BIO-165 BIO-168(S11555) or BIO-168(S16243); Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**BIO-230 Entomology** 3

Prerequisites: Take BIO-112;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

3 **BIO-231 Invertebrate Zoology** 3 0 4

Prerequisites: Take BIO-112;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

BIO-232 Vertebrate Zoology 3 3 0 4

Prerequisites: Take BIO-112;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**BIO-243** Marine Biology 3 3 0 4

Prerequisites: Take BIO-110 or BIO-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**BIO-250 Genetics** 3 3 0 4

Prerequisites: Take BIO-112;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

BIO-271 Pathophysiology 3 0 0 3

Prerequisites: Take BIO-163 BIO-166 BIO-169(S11629) 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. null uThis course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**BIO-275 Microbiology** 3 3 0 4

Prerequisites: Minimum grade C; Take 1 group; # take BIO-110; # Take BIO-111; # 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(S22835) CUL-160(S22847) BPA-210(S22830); Take CUL-110(S11030)

CUL-160(S13015);

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); 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);

Corequisites:

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); 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(S22835) CUL-160(S22847) BPA-150 BPA-210(S22830); 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-260 Pastry and Baking Marketing 2 2 0 3

Prerequisites: Take BPA-150 BPA-210(S22830); 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 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.

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BPR-230 Commercial Blueprints 1 2 0

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**BUS-116 Business Law II** 3 0 0 3

Prerequisites: Take BUS-115;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**BUS-139** Entrepreneurship I 3

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Prerequisites:

Corequisites:

This course provides an introduction to the principles of entrepreneurship. Topics include self-analysis of enterpreneurship 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-147 Business Insurance**  3

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Prerequisites:

Corequisites:

This course surveys the basic concepts of risk management. Topics include principles and applications of health, property, life, and casualty insurance. Upon completion, students should be able to evaluate different insurance needs and assist an organization in acquiring adequate insurance coverage.

**BUS-148** Survey of Real Estate 3

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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

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Prerequisites:

Corequisites:

This course introduces the basic concepts of identity and communication in the business setting. Topics include selfconcept, 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, selfdestructive, communication patterns and healthy, non-destructive, positive communication patterns.

**BUS-153 Human Resource Management**  3

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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-217 Employment Law and Regulations** 

Prerequisites:

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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

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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** 0 **Business Statistics** 2 2 3 Prerequisites: Take MAT-115(S13541) MAT-140(S13071) or MAT-161(S16425); 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. **BUS-230 Small Business Management** 3 3 Prerequisites: Take MTH-110(S22033); Corequisites: MTH-120 This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan. **BUS-234** 3 **Training and Development** 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** 3 0 0 3 Entrepreneurship II 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-253 Leadership and Management Skills** 3 0 0 3 Prerequisites: Corequisites: This course includes a study of the qualities, behaviors, and personal styles exhibited by leaders. Emphasis is placed on coaching, counseling, team building, and employee involvement. Upon completion, students should be able to identify and exhibit the behaviors needed for organizational effectiveness. Recruiting, Selection & Personnel Planning 3 3 **BUS-256** 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. null This course is a unique requirement of the Human Resources Management concentration in the Business Administration program. **BUS-258 Compensation and Benefits** 3 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, null This course is a unique requirement of the Human Resources Management concentration in the Business Administration program.

**BUS-259 HRM Applications** 3 0 0 3

Prerequisites: Take BUS-217, BUS-234, BUS-256, BUS-258;

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-111;

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-223 CT Clinical Practicum 0 0 9 3

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-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-225 CT Clinical Practicum** 0 0 15 5

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 Investigationn 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:

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 3 credits; From courses MAT-080, MAT-120(S20803), MAT-121(S20804), MAT-161(S20916)

MAT-171(S20807);

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 EGR-250, 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 3 credits; From courses CEG-151, DFT-151, EGR-120(S20678); # Take 3 credits; From

courses CEG-211; #Take 3 credits; From courses SRV-111, CIV-215(S23476);

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.

#### 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 ENG-090 or ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**CHI-181 Chinese Lab I** 0 2 0 1

Prerequisites: Take ENG-090 or ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

#### **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; #Take ENG-090

DMA-040, RED-090; # Take DMA-040 ENG-111;

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, MAT-070; #Take ENG-090,

DMA-040, RED-090; # Take ENG-111, 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

Prerequisites: Take 1 group; #Take ENG-090 MAT-070 RED-090; #Take ENG-111 MAT-070; #Take ENG-090

DMA-040 RED-090; # Take ENG-111 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. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

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

MAT-161(S20916); Minimum grade C; # Take CHM-092 ENG

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

CHM-152 General Chemistry II 3 3 0 4

Prerequisites: Minimum grade C; Take CHM-151;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

CHM-251 **Organic Chemistry I** 

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Prerequisites:

Minimum grade C; Take CHM-152;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

CHM-252 **Organic Chemistry II**  3 3 4

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Prerequisites:

Minimum grade C; Take CHM-251;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

CHM-261 **Quantitative Analysis** 

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, oxidationreduction, and compleximetric methods. Upon completion, students should be able to perform classical quantitative analytical procedures. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

#### (CIS Prefix) **INFORMATION SYSTEMS**

**CIS-070 Fundamentals of Computing** 

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Prerequisites:

Corequisites:

This course covers fundamental functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to operate computers, access files, print documents and perform basic applications operations.

**CIS-110 Introduction to Computers**  2

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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

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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

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;

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# 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-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.

CIS-260 Business Graphics Applications 2 2 0 3

Prerequisites: Take CIS-110(S12456) or CIS-111(S12478);

Corequisites:

This course utilizes graphics software in a variety of business applications. Topics include terminology, design and evaluation, graphics formats and conversion, practical applications of graphics software, and integration of peripherals. Upon completion, students should be able to create and incorporate graphic designs to enhance business communications.

#### 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 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.

1 3 **CIV-125** Civil/Surveying CAD 6 0

Prerequisites: Take ARC-114(S10248) or DFT-110;

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.

2 0 CIV-211 **Hydraulics and Hydrology** 3 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** 0 3 **Highway Technology** 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.

2 3 0 3 CIV-221 Steel and Timber Design

Prerequisites: Take EGR-250 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** 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-100 Basic Law Enforcement Training 9 30 0 19

Prerequisites:

Corequisites:

This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination. null This is a certificate-level course.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

CJC-144 Crime Scene Processing 2 3 0 3
Prerequisites:

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.

Prerequisites:

Corequisites:

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-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** 3 0 3 Victimology 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** 3 0 3 **Organization & Administration** 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. 3 **CJC-221 Investigative Principles** 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. 3 **CJC-222 Criminalistics** 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 (handicapped ) building codes. Upon completion, students should be able to understand the building code inspections process and apply building code principals and requirements to construction projects.

CMT-210 Professional Construction Supervision 3 0 0 3

Prerequisites:

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 Prerequisites: Corequisites:	Co-Op Work Experience I	0	0	0	3	
This course provious study. Emphasis	his course provides work experience with a college-approved employer in an area related to the student's program of udy. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, studen would be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related					
COE-114 Prerequisites: Corequisites:	Co-Op Work Experience I	0	0	0	4	
This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.						
COE-115 Prerequisites: Corequisites: This course descri	Work Experience Seminar I ription may be written by the individual colleges.	1	0	0	1	
COE-121 Prerequisites: Corequisites:	Co-Op Work Experience II	0	0	0	1	
This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.						
COE-122 Prerequisites: Corequisites:	Co-Op Work Experience II	0	0	0	2	
This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.						
COE-123 Prerequisites: Corequisites:	Co-Op Work Experience II	0	0	0	3	
This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.						
COE-125 Prerequisites: Corequisites: This course descri	Work Experience Seminar II ription may be written by the individual colleges.	1	0	0	1	
COE-131 Prerequisites: Corequisites:	Co-Op Work Experience III	0	0	0	1	
This course provides work experience with a college-approved employer in an area related to the student's program of						

study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students

should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

COE-211 Co-Op Work Experience IV

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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

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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 ENG-080, RED-080;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

COM-111 Voice and Diction I

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Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

COM-120 Intro to Interpersonal Communication

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Prerequisites: Take ENG-080, RED-080;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts (substitute).

COM-130 Nonverbal Communication

0 0

Prerequisites: Take COM-110 or COM-120(S21722);

Corequisites:

This course introduces the contemporary study of nonverbal communication in daily life. Topics include haptics, kinesics, proxemics, facial displays, and appearance. Upon completion, students should be able to analyze/interpret nonverbal communication and demonstrate greater awareness of their own nonverbal communication habits.

COM-140 Introduction to Intercultural Communication 3 0 0 3

Prerequisites: Take 1 group; # Take RED-090 ENG-090; #Take ENG-111;;

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;

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-160 Small Group Communication 3 0 0

Prerequisites: Take 1 group; # Take RED-090 ENG-090; #Take ENG-111;

Corequisites:

This course provides an overview of the theory, practice, and critical analysis of communication in the small group setting. Emphasis is placed on group development, conflict, and conformity; leadership skills and styles; group roles and ranks; and decision making, problem solving, and conflict resolution. Upon completion, students should be able to apply topics of gender, culture, and social-emotional functions within group settings. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**COM-231 Public Speaking** 3 0 0 3

Prerequisites: Take ENG-111; 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts (substitute).

COM-232 Election Rhetoric 3 0 0 3

Prerequisites: Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

COM-233 Persuasive Speaking 3 0 0

Prerequisites: Take 1 group; #Take ENG-112 COM-231; # Take ENG-113 COM-231; Take ENG-112 or ENG-113; Corequisites:

This course introduces theory and history of persuasive speaking, covering critical thinking skills in analyzing problems, assessing solutions, and communicating the information to an audience. Emphasis is placed on analysis, evidence, reasoning, and library and field research used to enhance persuasive public speaking skills. Upon completion, students should be able to apply the principles of persuasive speaking in a public setting. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

(COS Prefix)

#### COSMETOLOGY 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

Prerequisites:

Corequisites:

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

Prerequisites:

COS-112B Corequisites:

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.

0 **COS-112A** Salon I, Part 1 0 4 12

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.

0 **COS-112B** Salon I, Part 2 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:

COS-114 Corequisites:

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.

Cosmetology Concepts Ii, Part 1 2 0 0 2 **COS-113A** 

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 lii, 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 lii, 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 lii, 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** 0 0 Salon Iv, Part 1 15 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. 0 2 **COS-118B** Salon Iv, Part 2 6 0 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. 2 2 **COS-119 Esthetics Concepts I** 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 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. 1 **COS-119B Esthetics Concepts I, Part 2** 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 6 18 0 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** 0 0 Esthetics Salon I, Part 1 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;

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

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3

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

2

Prerequisites:

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

0

2

Prerequisites:

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

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

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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-125

**Intro to Parallel Programming** 

2

2

3

Prerequisites:

Corequisites:

This course introduces students to the techniques and tools used to write parallel programs. Topics include principles of parallel program design including architecture, algorithms, performance modeling, parallel programming standards, Message Passing Interface (MPI), OpenMP, API, and modern parallel languages. Upon completion, students should be able to discuss programming issues in a High Performance Computing system.

CSC-130

**Computing Fundamentals II** 

3

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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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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(S21061);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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.

2

CSC-136 Fortran Programming

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

CSC-139 Visual BASIC Programming

2 3 0 3

Prerequisites: Take 1 group; # Take MAT-070, RED-090; # Take MAT-070, ENG-111; # Take DMA-050,

RED-090; # Take DMA-050, ENG-111;

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

Prerequisites: Take 1 group; # Take RED-090, MAT-070; # Take ENG-111, MAT-070; #Take DMA-050, RED-090;

# Take DMA-050 ENG-111;

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-144 AS/400 CL Programming** 2 3 0 3

Prerequisites: Take CIS-115(S21061) NOS-211;

Corequisites:

This course introduces computer programming using the CL programming language. Topics include CL command structure, command parameters, creating CL programs, manipulating variables, writing commands to control jobs and workflow, and other related topics. Upon completion, students should be able to design, code, test, and debug CL programs.

CSC-150 Visual RPG Programming 2 3 0 3

Prerequisites:

Corequisites:

This course introduces computer programming using the Visual RPG programming language with structured programming principles. Topics include input/output operations, iteration, arithmetic operations, arrays, pointers, filters, and other related topics. Upon completion, students should be able to design, code, test and debug at a beginning level.

**CSC-151 JAVA Programming** 2 3 0 3

Prerequisites: Take CIS-115(S21061);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**CSC-152 SAS** 2 3 0 3

Prerequisites: Take 1 group; # Take MAT-070, RED-090; # Take MAT-070, ENG-111; # Take DMA-050, RED-090;

# Take DMA-050, ENG-111;

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; # Take DMA-050, RED-090;

# Take DMA-050 ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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, subprograms, 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-246 Realtime Programming 2 3 0 3

Prerequisites:

Corequisites:

This course covers the techniques for programming in a realtime environment. Topics include signals, critical sections, polling, interface devices, timing, open and closed loop control, speed/size optimization, and special considerations for embedded controllers. Upon completion, students should be able to write and modify interface routines used with time-critical applications.

CSC-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-255 Open Mp Programming** 2 3 0 3

Prerequisites: Take CSC-125;

Corequisites:

This course introduces students to the basics of using the OpenMP programming standard. Topics include directive-based shared memory parallel processing, incremental parallelization, and developing portable code for shared memory architectures using the OpenMP model. Upon completion, students should be able to design and code a program using the OpenMP standard.

CSC-258 JAVA Enterprise Programs 2 3 0 3

Prerequisites: 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-275 HPC Algorithms** 2 2 0 3

Prerequisites: Take CSC-125;

Corequisites:

This course introduces students to the various algorithms available for HPC environments. Topics include distributed algorithms, programming models for massively parallel machines, various parallel standard template libraries, distributed-memory message-passing algorithms, minimal communication and latency-tolerant algorithms. Upon completion, students should be able to discuss and code a program using HPC algorithms.

CSC-278 JAVA Message Service 2 3 0 3

Prerequisites: 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-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-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-140;

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);

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); # Take CTS-120(S20998)

CTS-135, CIS-111(S21059); # Take CTS-120(S20998) CTS-135; # Take CTS-120(S20998) CTI-130;

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-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.

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CTS-135 Integrated Software Intro 2 4 0

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-250 User Support & Software Evaluation 2 2 0 3

Prerequisites: Take CTS-120(S20998) NOS-130(S20983);

Corequisites:

This course provides an opportunity to evaluate software and hardware and make recommendations to meet end-user needs. Emphasis is placed on software and hardware evaluation, installation, training, and support. Upon completion, students should be able to present proposals and make hardware and software recommendations based on their evaluations.

CTS-255 Advanced 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-271
 Desktop Support: Operating System
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 Prerequisites:
 Take 1 group; #Take CIS-110(S21058) NOS-110; # Take CIS-111(S21059) NOS-110;
 # Take CIS-111(S21059) NOS-110;

Corequisites:

This course is designed to prepare students for a foundation in desktop support certifications in an operating system. Emphasis is placed on developing proficiency in the end-user support skills, processes, and procedures necessary to correctly support an operating system. Upon completion, students should be able to prepare for industry-level certifications and utilize advanced support tools to resolve operating system end-user problems.

CTS-272 Desktop Support: Applications 2 2 0 3

Prerequisites: Take 1 group; # Take CIS-110(S21058); # Take 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; Take CIS-115(S20794);

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-289 System Support Project 1 4 0 3

Prerequisites: Take CTS-285, CTS-135, CTS-220, NOS-230; Take CTS-285;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; #Take DMA-040 ENG-111;

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 CUL-110(S22835) CUL-112(S22837) CUL-140(S22844), CUL-240(S22853); 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); 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); 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-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(S20983);

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.

**SAS Performance Tuning** 2 2 0 **DBA-274** 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-289** 1 0 3 **Database Project** 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-291A Selected Topics in Database Management** Prerequisites: Take DBA-120, DBA-220; 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 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** 1 **Design Process I** 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. 2 **DDF-221 Design Drafting Project** 0 0 Take DFT-111(S16295) DFT-112(S16296) DFT-151; Prerequisites: 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** 

**DEVELOPMENTAL DISABILITIES** (DDT Prefix)

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Prerequisites:

**DDT-110** 

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. null This course is restricted to diploma and/or certificate programs.

**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. null This course is restricted to diploma and/or certificate programs.

**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. null This course is restricted to diploma and/or certificate programs.

**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. null This course is restricted to diploma and/or certificate programs.

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. null This course is restricted to diploma and/or certificate programs.

**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. null This course is restricted to diploma and/or certificate programs.

**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. null This course is restricted to diploma and/or certificate programs.

**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. null This course is restricted to diploma and/or certificate programs.

**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; Coreguisites: 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-125 Graphic Presentation I 0 6 0 2

Prerequisites:

Corequisites: ARC-111 DES-135

This course introduces graphic presentation techniques for communicating ideas. Topics include drawing, perspective drawing, and wet and dry media. Upon completion, students should be able to produce a pictorial presentation.

DES-135 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;

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-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-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) or DFT-111(S12693);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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; # Take DFT-111(S16295)

DFT-111A DFT-151 ARC-114(S10248); # Take DFT-111(S16295) or DFT-111(S12693);

#Take DFT-151;

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.

#### **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

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Proportion/Ratios/Rates/Percents

**DMA-030** 

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. **Expressions, Linear Equations, Linear Inequalities** 0 DMA-040 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 1 Take 1 group; # Take DMA-010, DMA-020, DMA-030, DMA-040; #Take MAT-060, DMA-040; Prerequisites: 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** Take 1 group; # Take DMA-010, DMA-020, DMA-030, DMA-040, DMA-050; # Take MAT-060, Prerequisites: 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. 1 **DMA-070** Rational Expressions and Equations 1 0 Take 1 group; #Take DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060; # Take Prerequisites: MAT-060, DMA-040, DMA-050, DMA-060; # Take MAT-060, MAT-070, DMA-060; # Take DMA-010 DMA-020, DMA-030, MAT-070, DMA-060; 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 Take 1 group; # Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060, DMA-070; Prerequisites: # Take MAT-060 MAT-070 DMA-060 DMA-070; #Take MAT-060 DMA-040 DMA-050 DMA-060, DMA-070; # Take DMA-010 DMA-020 DMA-030 MAT-070 DMA-060 DMA-070; Corequisites: This course provides a conceptual study of the manipulation of radicals and the application of radical equations to realworld 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 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 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 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. 2 2 **DMS-002A Developmental Math Shell 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. 2 3 **DMS-003** 2 0 **Developmental Math Shell 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. 3 2 4 **DMS-004 Developmental Math Shell 4** 0 Prerequisites:

Corequisites:

This course provides an opporturnity 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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

DRA-122 Oral Interpretation 3 0 0 3

Prerequisites: Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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;

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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**DRA-128 Children's Theatre** 3 0 0 3

Prerequisites:

Corequisites:

This course introduces the philosophy and practice involved in producing plays for young audiences. Topics include the selection of age-appropriate scripts and the special demands placed on directors, actors, designers, and educators in meeting the needs of young audiences. Upon completion, students should be able to present and critically discuss productions for children.

**DRA-130** Acting I 0 6 0 3

Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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: 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: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**DRA-170 Play Production I** 0 9 0 3

Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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 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. null Please note: (TM) represents registered trademark.

3 **DRE-097** Integrated Reading and Writing II 2 n

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 welldeveloped, 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. null Please note: (TM) represents registered trademark.

**DRE-098 Integrated Reading and Writing III** 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 welldeveloped, 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. null Note: (TM) represents registered trademark.

2 **DRE-099 Integrated Reading Writing III Option** 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. null Note: (TM) represents registered trademark.

#### **ELECTRONIC COMMERCE** (ECM Prefix)

**ECM-168 Electronic Business** 2 2 3

Prerequisites:

Corequisites:

This course provides a survey of the world of electronic business. Topics include the definition of electronic business, current practices as they evolve using Internet strategy in business, and application of basic business principles to the world of e-commerce. Upon completion, students should be able to define electronic business and demonstrate an understanding of the benefits of e-commerce as a foundation for developing plans leading to electronic business implementation. null This course is a unique requirement of the E-Commerce concentration in the Business Administration program.

Introduction to E-Commerce 2 2 0 ECM-210 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. ECO-251 **Principles of Microeconomics** 3 3 Prerequisites: Corequisites: This course introduces economic analysis of individual, business, and industr 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. **ECO-252** 3 0 3 **Principles of Macroeconomics** 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. **EDUCATION** (EDU Prefix) **EDU-114 Introduction to Family Childcare** 0 Take 1 group; # Take ENG-080 RED-080 MAT-060; # Take ENG-085 MAT-060; # Take MAT-060 Prerequisites: ENG-111; # Take DMA-040 ENG-080 RED-080; # Take ENG-111 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 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: 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: Take 1 group; # Take ENG-080 RED-080; # Take ENG-085;

Extra:

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: Take 1 group; # Take ENG-080 RED-080 EDU-119(S22283); # Take ENG-085 EDU-119(S22283); 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: 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 EDU-14

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: 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; #Take ENG-085 EDU-119(S22283) EDU-144(S22288) EDU-145(S22289) EDU-146(S22290) EDU-157(S22303) ENG-111

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. null null

EDU-153 Health, Safety and Nutrition 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 quidelines, 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** 2 0 3 **Active Play** 

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-163 Classroom Management and Instruction** 0 3 3 0

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** 2

Take 1 group; # Take EDU-119(S22283) ENG-080 RED-080 EDU-131(S22287); # Take Prerequisites:

EDU-119(S22283) ENG-085 EDU-131(S22287)

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

Prerequisites: Take 1 group; # Take ENG-080 RED-080 EDU-119(S22283); # Take ENG-085 EDU-119(S22283) 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** 0 **Foundations of Education** 4

Take 1 group; # Take ENG-090 RED-090; #Take ENG-095; Prerequisites:

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** 

Take 1 group; # Take ENG-090 RED-090 EDU-144(S22288) EDU-145(S22289) EDU-119(S22283); Prerequisites: # 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)

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

Prerequisites: Take 1 group; # Take ENG-090 RED-090 EDU-119(S22283) EDU-144(S22288); # Take ENG-095

EDU-119(S22283) EDU-144(S22288);

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: 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: 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: 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: 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: Take 1 group; # Take ENG-090 RED-090 EDU-151(S22294) ENG-112; # Take ENG-095

EDU-151(S22294) ENG-112;

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-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 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: Take 1 group; #Take ENG-090 RED-090 EDU-119(S22283); # Take ENG-095 EDU-119(S22283)

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: Take 1 group; # Take ENG-090 RED-090 ENG-112 CIS-111(S21059) PSY-150; # Take ENG-090

RED-090 ENG-112 CIS-111(S21059) SOC-210; # Take ENG-095 ENG-112 CIS-111(S21059)

PSY-150; # Take ENG-095 ENG-112 CIS-111(S21059) SOC-210;

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: Take 1 group; # Take ENG-090 RED-090 EDU-282(S22341); # Take ENG-095 EDU-282(S22341)

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: Take 1 group; #Take ENG-090 RED-090 EDU-119(S22283) EDU-144(S22288) EDU-145(S22289)

EDU-146(S22290) ENG-111; # Take ENG-095 EDU-119(S22283) EDU-144(S22288)

EDU-145(S22289) EDU-146(S22290) ENG-111;

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-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)

#### 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-251(S22331) EDU-261(S22346) EDU-282(S22341) ENG-090 RED-090

EDU-119(S22283) EDU-131(S22287) EDU-144(S22288) EDU-145(S22289)

#### 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 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-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.

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**EFL-094 Composition IV** 5 0

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-130 Engineering Cost Control 2 2 0 3

Prerequisites: Take MAT-121(S13643) MAT-121(S12145) MAT-161(S16425) MAT-161(S11328) or

MAT-171(S11257);

Corequisites:

This course covers the management of projects and systems through the control of costs. Topics include economic analysis of alternatives within budget constraints and utilization of the time value of money approach. Upon completion, students should be able to make choices that optimize profits on both short-term and long-term decisions.

EGR-131 Introduction to Electronics Technology 1 2 0 2

Prerequisites:

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, micro-computers in engineering. Upon completion, students should be able to demonstrate understanding of the engineering process and profession. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

EGR-220 Engineering Statics

3 0 0 3

Prerequisites: Minimum grade C; Take PHY-251;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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, troubleshoot, and repair 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, and analyze simple DC/AC circuits.

**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-113 Residential Wiring 2 6 0 4

Prerequisites:

Corequisites:

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-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-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-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 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-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-118 National Electrical Code 1 2 0 2

Prerequisites:

Corequisites: ELC-113

This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.

**ELC-119 NEC Calculations** 1 2 0 2

Prerequisites: 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

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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 Programmable Logic Controller

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Prerequisites:

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 DC/AC Circuit Analysis

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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-131 Circuit Analysis I

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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

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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

ELC-117

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Prerequisites:

Take ELC-112(S21587);

Corequisites:

This course covers single- and three-phase transformer applications as found in industrial/commercial buildings and machinery. Topics include transformer principles, single- and three-phase calculations, and connections. Upon completion, students should be able to understand single-and three-phase transformers, make transformer connections, and make calculations.

ELC-229 Applications Project

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Take ELC-113(S11805) ELC-128(S10676) ELN-229(S21638) ELN-133(S16330);

Prerequisites: 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.

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ELC-231 Electric Power Systems 3 2 0

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 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 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:

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-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(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.

3 0 **ELN-229 Industrial Electronics** 3 4 Take ELC-112(S23481); Prerequisites: 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-229A Industrial Electronics Part 1** 3 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** 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** 0 3 Prerequisites: Take ELC-112(S21587) ELC-131(S21593) or ELC-140; 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** 3 3 **Introduction to Microprocessors** Prerequisites: Take ELN-133(S16330); 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. 3 **ELN-233** 3 0 4 **Microprocessor Systems** Prerequisites: Take ELN-232(S21640); 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 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.

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ELN-235 Data Communication Systems 3 3 0

Prerequisites: 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:

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-275 Troubleshooting 1 3 0 2

Prerequisites:

Corequisites: ELN-133

This course covers techniques of analyzing and repairing failures in electronic equipment. Topics include safety, signal tracing, use of service manuals, and specific troubleshooting methods for analog, digital, and other electronics-based circuits and systems. Upon completion, students should be able to logically diagnose and isolate faults and perform necessary repairs to meet manufacturers' specifications.

#### EMERGENCY MEDICAL CARE (EMS Prefix)

**EMS-110 EMT-Basic** 5 6 0 7

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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-110A Emt-Basic Part 1** 2 3 0 3

Prerequisites: Take 1 group; #Take ENG-090 RED-090; # Take ENG-111;

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-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 I for EMS 1 3 0 2

Prerequisites: Take EMS-110(S16335); Coreguisites: EMS-120 EMS-131

This course introduces the fundamental principles of pharmacology and medication administration and is required for intermediate and paramedic certification. Topics include terminology, pharmacokinetics, pharmacodynamics, weights, measures, drug calculations, legislation, and administration routes. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology.

EMS-131 Advanced Airway Management 1 2 0 2

Prerequisites: Take EMS-110(S16335); Coreguisites: 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 and is required for paramedic certification. Topics include response to hazardous material conditions, medical incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment.

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 & EMS Communication 1 3 0 2

Prerequisites:

Corequisites:

This course examines the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment and is required for paramedic certification. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs.

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**Advanced Patient Assessment** 

Prerequisites: Take 1 group; #Take EMS-120(S10478) EMS-130(S16339) EMS-131 EMS-121(S10423); #Take EMS-120(S10478) EMS-130(S16339) EMS-131 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 2 4 Take EMS-120(S10478) EMS-130(S16339) EMS-131; Prerequisites: Corequisites: This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, rhythm interpretation, cardiac pharmacology, and patient treatment. Upon completion, students should be able to certify at the Advanced Cardiac Life Support Provider level utilizing American Heart Association guidelines. EMS-221 **EMS Clinical Practicum II** 0 0 3 Prerequisites: Take 1 group; # Take EMS-121(S20540); # Take EMS-122(S10485) COE-111; Corequisites: This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. 2 **EMS-230** Pharmacology II for EMS 1 3 0 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 3 Take 1 group; # Take EMS-221; # Take EMS-222 COE-121; Prerequisites: Corequisites: This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. **EMS-235** 2 2 **EMS Management** 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.

Corequisites:

Prerequisites:

**EMS-240** 

**Special Needs Patients** 

**EMS-210** 

This course includes concepts of crisis intervention and techniques of dealing with special needs patients and is required for paramedic certification. Topics include behavioral emergencies, abuse, assault, challenged patients, personal well-being, home care, and psychotherapeutic pharmacology. Upon completion, students should be able to recognize and manage frequently encountered special needs patients.

EMS-120(S10478) EMS-122(S10485) EMS-130(S16339) EMS-131;

Take 1 group; #Take EMS-120(S10478) EMS-121(S10423) EMS-130(S16339) EMS-131; #Take

EMS-241 EMS Clinical Practicum IV 0 0 9 3
Prerequisites: Take 1 group; # Take EMS-231; #Take EMS-232 COE-131;

Corequisites:

This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic.

EMS-250 Adv. Medical Emergencies 2 3 0 3

Prerequisites: # Take EMS-121(S10423) or EMS-122(S10485); # Take EMS-120(S10478) EMS-130(S16339)

EMS-131;

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 pulmonology, neurology, endocrinology, anaphylaxis, gastroenterology, toxicology, and environmental emergencies integrating case presentation and emphasizing pharmacotherapeutics. Upon completion, students should be able to recognize and manage frequently encountered medical conditions based upon initial patient impression.

EMS-260 Advanced Trauma Emergencies 1 3 0 2

Prerequisites: # Take EMS-121(S10423) or EMS-122(S10485); # Take EMS-120(S10478) EMS-130(S16339)

EMS-131;

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 hemorrhage control, shock, burns, and trauma to head, spine, soft tissue, thoracic, abdominal, and musculoskeletal areas with case presentations utilized for special problems situations. Upon completion, students should be able to recognize and manage trauma situations based upon patient impressions and should meet requirements of BTLS or PHTLS courses.

EMS-270 Life Span Emergencies 2 2 0 3

Prerequisites: Take EMS-120(S10478) EMS-130(S16339) EMS-131;

Corequisites:

This course, required for paramedic certification, covers medical/ethical/legal issues and the spectrum of age-specific emergencies from conception through death. Topics include gynecological, obstetrical, neonatal, pediatric, and geriatric emergencies and pharmacological therapeutics. Upon completion, students should be able to recognize and treat age-specific emergencies and certify at the Pediatric Advanced Life Support Provider level.

**EMS-285 EMS Capstone** 1 3 0 2

Prerequisites: Take EMS-220(S16342) EMS-250(S11267) EMS-260;

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-075 Reading & Language Essentials 5 0 0 5

Prerequisites:

Corequisites:

This course uses whole language to develop proficiency in basic reading and writing. Emphasis is placed on increasing

vocabulary, developing comprehension skills, and improving grammar. Upon completion, students should be able to understand and create grammatically and syntactically correct sentences.

ENG-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-101** Applied Communications I 3 0 0 3

Prerequisites: Corequisites:

This course is designed to enhance reading and writing skills for the workplace. Emphasis is placed on technical reading, job-related vocabulary, sentence writing, punctuation, and spelling. Upon completion, students should be able to identify main ideas with supporting details and produce mechanically correct short writings appropriate to the workplace. null This course is restricted to diploma and/or certificate programs.

ENG-110 Freshman Composition 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-080; #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-111 Expository Writing 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-095; # Take DRE-098(S23643); # Take

DRE-099(S23644);

Corequisites:

This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English.

ENG-111A Expository Writing Lab 0 2 0 1

Prerequisites: Take 1 group; # Take RED-090 ENG-090; # Take ENG-095; # 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 Argument-Based Research 3 0 0 3

Prerequisites: Minimum grade C; Take ENG-111;

Corequisites:

This course, the second in a series of two, introduces research techniques, documentation styles, and argumentative strategies. Emphasis is placed on analyzing information and ideas and incorporating research findings into documented argumentative essays and research projects. Upon completion, students should be able to summarize, paraphrase, interpret, and synthesize information from primary and secondary sources using standard research format and style. null This course has been approved to satisfy the Comprehensive Agreement general education core requirement in English composition.

ENG-113 Literature-Based Research 3 0 0 3

Prerequisites: Minimum grade C; Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.

ENG-114 Professional Research & Reporting 3 0 0 3

Prerequisites: Minimum grade C; Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.

**ENG-125** Creative Writing I 3 0 0 3

Prerequisites: Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ENG-231 American Literature I 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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 interpret, analyze, and respond to literary works in their historical and cultural contexts. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG-232 American Literature II 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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 interpret, analyze, and respond to literary works in their historical and cultural contexts. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG-234 Modern American Poets 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

ENG-241 British Literature I 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG-242 British Literature II 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**ENG-253** The Bible As Literature 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

Corequisites:

This course introduces the Hebrew Old Testament and the Christian New Testament as works of literary art. Emphasis is placed on the Bible's literary aspects including history, composition, structure, and cultural contexts. Upon completion, students should be able to identify and analyze selected books and passages using appropriate literary conventions. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**ENG-261** World Literature I 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG-262 World Literature II 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG-272 Southern Literature 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

Corequisites:

This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

ENG-273 African-American Literature 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**ENG-274** Literature by Women 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**ENG-275** Science Fiction 3 0 0 3

Prerequisites: Take ENG-112 ENG-113 or ENG-114;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

#### **ENVIRONMENTAL SCIENCE (ENV Prefix)**

ENV-110 Environmental Science 3 0 0 3

Prerequisites:

Corequisites:

This course covers the environmental problems facing society today. Topics include population, natural resources, air and water pollution, and waste disposal problems. Upon completion, students should be able to demonstrate insight into the role the individual plays in shaping the environment.

**ENV-110A** 2 0 **Environmental Science Laboratory** 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 3 n

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** 2 0 **Environmental Education II** 3 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** 0 4

Take 1 group; # Take ENV-110(S13454); # Take BIO-140 BIO-140A; Prerequisites:

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** 2

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** 0 Instrumentation 3 4

Take 1 group; # Take ENV-110(S13454); # Take BIO-140 BIO-140A; # Take PTC-110; Prerequisites:

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; # 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 ENV-110(S13454); #Take BIO-111 BIO-140 BIO-140A;

Corequisites:

This course cover 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. Topics include the development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group, meeting NFPA 1021.

FIP-128 Detection & Investigation 3 0 0 3

Prerequisites:

Corequisites:

This course covers procedures for determining the origin and cause of accidental and incendiary fires. Topics include collection and preservation of evidence, detection and determination of accelerants, courtroom procedure and testimony, and documentation of the fire scene. Upon completion, students should be able to conduct a competent fire investigation and present those findings to appropriate officials or equivalent, meeting NFPA 1021.

FIP-132 Building Construction 3 0 0 3

Prerequisites:

Corequisites:

This course covers the principles and practices related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse, and other related topics. Upon completion, students should be able to understand and recognize various types of construction and their positive or negative aspects as related to fire conditions, meeting NFPA 1021.

FIP-136 Inspections & Codes 3 0 0 3

Prerequisites:

Corequisites:

This course covers the fundamentals of fire and building codes and procedures to conduct an inspection. Topics include review of fire and building codes, writing inspection reports, identifying hazards, plan reviews, site sketches, and other related topics. Upon completion, students should be able to conduct a fire code compliance inspection and produce a written report, meeting NFPA 1021.

FIP-144 Sprinklers & 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 couvers fire protection law. 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 Prerequisites: Corequisites:	Computers in Fire Service	1	2	0	2
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 Prerequisites: Corequisites:	OSHA Standards	3	0	0	3
This course covers public and private sector OSHA work site requirements. 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 Prerequisites: Corequisites:	HazMat: Operations	4	0	0	4
This course is designed to increase first responder awareness of the type, nature, physiological effects of, and defensive techniques for mitigation of HazMat incidents. Topics include recognition, identification, regulations and standards, zoning, resource usage, defensive operations, and other related topics. Upon completion, students should be able to recognize and identify the presence of hazardous materials and use proper defensive techniques for incident mitigation.					
Prerequisites: Corequisites: This course provides preparation for command of initial incident operations involving emergencies within both the public and private sector. Topics include incident management, fire-ground tactics and strategies, incident safety, and command/control of emergency operations. Upon completion, students should be able to describe the initial incident system as it relates to operations involving various emergencies in fire and non-fire situations, meeting NFPA 1021.					
FIP-221 Prerequisites: Corequisites:	Advanced Fire Fighting Strategies Take FIP-220(S13944);	3	0	0	3
This course covers command-level operations for multi-company/agency operations involving fire and non-fire emergencies. Topics include advanced ICS, advanced incident analysis, command-level fire operations, and control of both man made and natural major disasters. Upon completion, students should be able to describe proper and accepted systems for the mitigation of emergencies at the level of overall scene command.					
FIP-228 Prerequisites: Corequisites:	Local Government Finance	3	0	0	3
This course introduces local governmental financial principles and practices. Topics include budget preparation and justification, revenue policies, statutory requirements, audits, and the economic climate. Upon completion, students should be able to comprehend the importance of finance as it applies to the operations of a department.					
	Fire Dynamics and Combustion rs the theories and fundamentals of how and why fire		-		-
controlled. Topics include components of fire, fire sources, fire behavior, properties of combustible solids, classification of hazards, and the use of fire extinguishing agents. Upon completion, students should be able to describe the properties of matter and dynamics of fire, identify fuel sources, and compare suppressants and extinguishment techniques.					

FIP-230 5 0 0 **Chemistry of Hazardous Materials I** 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 2 **Hydraulics & Water Distribution** 3 Take MAT-115(S20802) MAT-120(S20803) MAT-121(S20804) MAT-140(S20907) MAT-151(S21171) Prerequisites: 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 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. 0 FIP-240 3 0 3 **Fire Service Supervision** 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. 3 FIP-244 **Fire Protection Project** 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. 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 should be able to demonstrate knowledge of the personnel function as it relates to managing fire protection. FIP-256 **Municipal Public Relations** 3 0 0 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.

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3

FIP-260 Fire Protection Planning 3 0

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. Topics include finance, staffing, equipment, code enforcement, management information, specialized services, legal issues, planning, and other related topics. Upon completion, students should be able to understand concepts and apply fire department management and operations principles, meeting NFPA 1021.

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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

FRE-112 Elementary French II 3 0 0 3

Prerequisites: Minimum grade C; Take FRE-111;

Corequisites: FRE-182

This course is a continuation of FRE 111 focusing on the fundamental elements of the French language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate further cultural awareness. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

FRE-181 French Lab 1 0 2 0 1

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

Corequisites: FRE-111

This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

FRE-182 French Lab 2 0 2 0 1

Prerequisites: Minimum grade C; Take FRE-181;

Corequisites: FRE-112

This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate cultural awareness. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

FRE-211 Intermediate French I 3 0 0 3

Prerequisites: Minimum grade C; Take FRE-112;

Corequisites: FRE-281

This course provides a review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

FRE-212 Intermediate French II 3 0 0 3

Prerequisites: Take FRE-211; Coreguisites: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

FRE-221 French Conversation 3 0 0 3

Prerequisites: Take FRE-212;

Corequisites:

This course provides an opportunity for intensive communication in spoken French. Emphasis is placed on vocabulary acquisition and interactive communication through the discussion of media materials and authentic texts. Upon completion, students should be able to discuss selected topics, express ideas and opinions clearly, and engage in formal and informal conversations. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

FRE-281 French Lab 3 0 2 0 1

Prerequisites: Minimum grade C; Take FRE-182;

Corequisites: FRE-211

This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

# FOOD SERVICE TECHNOLOGY (FST Prefix) (offered to prison inmates only)

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 Introductory Geology 3 2 0 4

Prerequisites: Take 1 group; # Take ENG-090 MAT-070 RED-090; # Take ENG-111 MAT-070;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

GEL-113 Historical Geology 3 2 0

Prerequisites: Minimum grade C; Take GEL-111 or GEL-120;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

GEL-120 Physical Geology 3 2 0 4

Prerequisites: Take 1 group; # Take ENG-090 MAT-070 RED-090; # Take ENG-111 MAT-070; # Take DMA-040

ENG-090 RED-090; # Take DMA-040 ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

GEL-230 Environmental Geology 3 2 0 4

Prerequisites: Minimum grade C; Take GEL-111 GEL-120 or PHS-130;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

#### **GEOGRAPHY** (GEO Prefix)

**GEO-110** Introduction to Geography 3 0 0

Prerequisites:

Corequisites:

This course introduces map reading skills and the physical and cultural features of different areas of the earth. Topics include spatial association, the importance of location, physical characteristics of the earth, and the impact of humans on the environment. Upon completion, students should be able to demonstrate an ability to read a map and describe physical and cultural features of different regions. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

GEO-111 World Regional Geography 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

Corequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

GEO-112 Cultural Geography 3 0 0

Prerequisites: Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

#### 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 RED-090 MAT-060;

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-111 Typography II

2 0 3

2

2

Prerequisites: Take GRD-110;

Corequisites:

This course is a continuation of GRD 110. Emphasis is placed on solving challenging typographic problems. Upon completion, students should be able to understand and demonstrate advanced typographic applications.

GRD-117 Design Career Exploration 2 0 0

Prerequisites:

Corequisites:

This course covers opportunities in the graphic design field and employment requirements. Topics include evaluation of career choices, operations, structure of advertising and graphic design businesses, and related business issues. Upon completion, students should be able to demonstrate an understanding of the graphic design field and consider an appropriate personal direction of career specialization.

GRD-121 Drawing Fundamentals I 1 3 0 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.

2

**GRD-131** Illustration I 1 3 0

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 RED-090 or ENG-111;

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 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-151 Computer Design Basics 1 4 0 3

Prerequisites: Take RED-090 MAT-060;

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;

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-157 Computer Design Applications II 0 3 0 1

Prerequisites:

Corequisites: GRD-152

This course is designed to provide additional hands-on training with computer software applications. Emphasis is placed on utilizing appropriate computer applications to create and develop intermediate graphic designs. Upon completion, students should be able to produce intermediate graphic design projects using the computer.

GRD-160 Photo Fundamentals I 1 4 0 3

Prerequisites: Corequisites:

This course introduces basic camera operations, roll film processing, and photographic print production. Topics include contrast, depth-of-field, subject composition, enlarger operation, and density control. Upon completion, students should be able to produce photographic prints with acceptable density values and quality.

GRD-161 Photo Fundamentals II 1 4 0 3

Prerequisites: Take GRD-160;

Corequisites:

This course is a continuation of GRD 160. Topics include conversions, toning, color, specialized equipment, lighting, processing, and other methods and materials. Upon completion, students should be able to demonstrate proficiency in producing photographic prints.

**GRD-167** Photographic Imaging I 1 4 0 3

Prerequisites:

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-175** 3-D Animation Design 1 4 0 3

Prerequisites: Take GRD-151 or GRA-151;

Corequisites:

This course explores three-dimensional animation design and production. Emphasis is placed on developing essential skills and techniques using three-dimensional animation software from conceptualization to completion including design, illustration, color, spatial depth, and movement. Upon completion, students should be able to produce animation sequences for computer-related presentations.

GRD-193 Selected Topics in 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 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-232 Fashion Illustration 1 3 0 2

Prerequisites: Take GRD-131;

Corequisites:

This course is a study of the current fashion figure. Emphasis is placed on form and movement combined with colors,

patterns, fabrics, textures, and styles to create exciting illustrations. Upon completion, students should be able to illustrate fashion figures and accessories using various media.

GRD-233 Product Illustration 1 3 0 2

Prerequisites: # Take GRD-131 or GRD-230; # Take GRA-152 or GRD-152;

Corequisites:

This course covers the rendering and illustration of products for commercial purposes. Topics include viewpoint, styles, media, and subjects such as household, industrial, hardware, and sporting goods. Upon completion, students should be able to illustrate products using traditional line, continuous-tone, and digital media.

GRD-241 Graphic Design III 2 4 0 4

Prerequisites: 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-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 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; #Take GRD-142; # Take GRD-152 or GRA-152;

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; # Take GRD-151

ENG-110(S22173); # Take GRD-151 ENG-111; Take ENG-110(S20133) or ENG-111;

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; #Take GRD-142 GRA-152; # Take GRD-142 GRA-152 GRD-152 ENG-111; #Take GRD-142 GRD-152 GRA-152; Coreguisites:

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

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 ENG-090 RED-090;

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. HEALTH (HEA Prefix) HEA-110 Personal Health/Wellness 3 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. 0 2 **HEA-112** First Aid & CPR 1 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)** 3 9 0 6 **HET-110 Diesel Engines** 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. 3 5 **HET-112 Diesel Electrical Systems** 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 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 0 3 Prerequisites:

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.

Corequisites:

HET-116 **Air Conditioning - Diesel Equipment** 2 0 2 1 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. 1 2 2 **Introduction to Mobile Equipment** 0 HET-120 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. 1 3 0 **HET-125 Preventive Maintenance** 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 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 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. **Diesel Fuel and Power System** 2 3 **HET-134** 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-192A** Selected Topics in Heavy Equip & Trans 2 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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS-112 World Civilizations II 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS-121 Western Civilization I 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**HIS-122 Western Civilization II** 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**HIS-131** American History I 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS-132 American History II 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS-151 Hispanic Civilization 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;;

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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**HIS-167** The Vietnam War 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HIS-216 Twentieth-Century Europe 3 0 0 3

Prerequisites: Take ENG-090 RED-090;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HIS-221 African-American History 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HIS-222 African-American History I 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HIS-223 African-American History II 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**HIS-226 The Civil War** 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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;

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. null null

HIS-236 North Carolina History 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**HIS-242** Russian History From 1917 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

Corequisites:

This course covers the development of Russia from 1917 to the present. Topics include the Russian Revolution, Stalinism, Marxist foreign policy, the world wars, the Cold War, and the present. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Russia since 1917. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HIS-251 English History I 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111;

Corequisites:

This course traces the political, social, and economic development of England to the Elizabethan period. Topics include the early development of England, the Norman conquest, medieval society, and Elizabethan England. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early English history. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**HIS-252** English History II 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

Corequisites:

This course traces the political, social, and economic development of England from the Elizabethan period to the present. Topics include imperialism, industrial development, civil wars, and world wars. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in English history from Elizabethan England to the present. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HIS-271 The French Revolution Era 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

Corequisites:

This course traces the causes and effects of the French Revolution. Topics include the Enlightenment; Jacobins; Reign of Terror; Napoleon's republic, empire, and wars; and the French Revolution's impact upon world history. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments during the French revolutionary era. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

#### 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.

#### HISTORY (HIS Prefix)

#### 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 Take CTI-193A; Prerequisites: 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. 2 **HPC-150** 2 0 3 **Hpc Networking Technology** 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 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. 2 **HPC-162 Hpc Security** 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. 2 2 3 **HPC-170 Intro to Hpc Data Mining** 0 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

**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

completion, students should be able to define and discuss performance evaluation of a database in a HPC environment.

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** 

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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

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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

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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

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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** 

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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** 

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** 

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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.

#### **HOSPITALITY 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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; #Take DMA-040 ENG-111;

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 MAT-070; #Take DMA-040

RED-090 ENG-090; #Take DMA-040 ENG-111;

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 MAT-070; #Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; # Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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 MAT-070; #Take DMA-040

RED-090 ENG-090; # Take DMA-040 ENG-111;

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); Take HRM-110(S10998);

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 SERVICES** (HSC 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 ENG-090 RED-090;

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-115 Health Care Concepts 3 2 0 4

Prerequisites:

Corequisites:

This course covers basic aspects of health and medical care. Emphasis is placed on the mental, social, and physical needs of various groups; first aid in emergency situations; and medical/legal ethics. Upon completion, students should be able to identify various health/medical situations, obtain appropriate certifications, and understand the medical/legal ramifications of health care.

HSE-123 Interviewing Techniques 2 2 0 3

Prerequisites: Take ENG-090 RED-090 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 ENG-090 RED-090 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.

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HSE-127 Conflict Resolution 2 2 0

Prerequisites: Take ENG-090 RED-090;

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 ENG-090 RED-090;

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 ENG-090 RED-090;

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-220 Case Management 2 2 0 3

Prerequisites: # Take HSE-110 ENG-090 RED-090 DMA-010 DMA-020 DMA-030 DMA-040 DMA-050; # Take

HSE-110 ENG-111 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 ENG-090 RED-090;

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 ENG-090 RED-090:

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 ENG-090 RED-090;

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 Therapy** 2 2 0 3

Prerequisites: Take ENG-090 RED-090;

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 therapy. Upon completion, students should be able to define, plan, and adapt recreational activities for selected groups and individuals.

HSE-251 Activities Planning 2 2 0 3

Prerequisites: Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM-115 Critical Thinking** 3 0 0 3

Prerequisites: Take 1 group; # 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM-122 Southern Culture** 3 0 0 3

Prerequisites: Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

Corequisites:

This course explores the major qualities that make the South a distinct region. Topics include music, politics, literature, art, religion, race relations, and the role of social class in historical and contemporary contexts. Upon completion, students should be able to identify the characteristics that distinguish Southern culture. null This course has been

approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM-130 Myth in Human Culture

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Prerequisites:

Take 1 group; # Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM-160 Introduction to Film

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Prerequisites: Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM-161** Advanced Film Studies

2 0

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM-170** The Holocaust

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Prerequisites:

Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HUM-211 Humanities I

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Prerequisites:

Take ENG-111;

Extra:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM-212 Humanities II

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Prerequisites:
Corequisites:

s: Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM-220** Human Values and Meaning 3 0 0 3

Prerequisites: Take ENG-111;"

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM-230 Leadership Development 3 0 0 3

Prerequisites: Take ENG-111;

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. null null null

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.

implementation a	Environmental Health & Safety  ers workplace environmental, health, and safety concluded enforcement of environmental health and safety concompletion, students should be able to demonstrated and safety.	regulation	ns and on	preventi	ng accidents, injur	ies,
ISC-128 Prerequisites: Corequisites: This course intromanagement prin	Industrial Leadership  duces principles and techniques for managers in monciples and processes, managing conflict, group dyn Upon completion, students should be able to unders	amics, te	am buildi	ng, couns	seling, motivation,	
probability, proce	Manufacturing Quality Control Take EGR-115(S20666); duces quality concepts and techniques used in induses control, process capability, and quality improvem n understanding of the concepts and principles of quality improvements.	ent tools.	Upon co	mpletion	, students should l	
including quality organization desi solving skills. Up	Principles of Industrial Management  ers the managerial principles and practices required from the productivity improvement. Topics include the furtient ign, planning and control of manufacturing operation on completion, students should be able to demonstrating into job situations.	nctions ar , managir	nd roles o	f all level t, group o	s of the managemelynamics, and prob	ent, olem
analysis, standar	Productivity Analysis I  ers modern methods of measuring, analyzing, and im- dized practices, process analysis, and human factor of improvement techniques.					
work environment and roles of qual	QA Fundamentals  esigned to increase fundamental knowledge in the phast. Topics include the history and basics of quality, phasty professions, with emphasis on cGMP environmental and amentals, components of quality systems, and ide	ilosophie t. Upon	es of qual completic	ity, daily a n, studer	application of princ nts should be able	ciples,
ISC-221 Prerequisites: Corequisites: This course cove Emphasis is place inspections, proc	Statistical Quality Control  ers the principles and techniques of statistical process and on basic statistics for quality control, organization areas control, and tests of significance. Upon complete achniques to enhance production.	3 s control and pro	0 for the im cedures f	0 proveme or efficier	3 ant of productivity.	

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.

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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

JOU-111 Publication Workshop I 1 3 0 2

Prerequisites: Take JOU-110;

Corequisites:

This course introduces the basic techniques of producing a publication. Emphasis is placed on writing, editing, layout, design, and printing. Upon completion, students should be able to demonstrate competence in the various phases of publication production.

JOU-242 Introduction to Multimedia 2 2 0 3

Prerequisites: Take 1 group; # Take RED-090 ENG-090 CIS-110(S21058); #Take ENG-111 CIS-110(S21058);

Take CIS-110(S12456);

Corequisites:

This course is an introduction to the basic formatting skills necessary to create messages for the multimedia environment, such as web-based and other digital formats. Emphasis is placed on the use of computers to present and combine text, graphics, audio, and video. Upon completion, students should be able to create state-of-the-art multimedia presentations. null This course has been approved to satisfy the Comprehensive Articulation Agreement as a premajor and/or elective course requirement.

#### 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);

Extra:

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-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.

1

MAT-051 Fast Track Basic Math 1

Prerequisites:

Corequisites:

This course is designed to offer a fast-paced review of basic arithmetic skills for students who have previously mastered these skills. Topics include all arithmetic operations on whole numbers, fractions, decimals and percents. Upon completion, students should be able to demonstrate mastery of basic computational skills, as well as their application to relevant mathematical problems.

MAT-060 Essential Mathematics 3 2 0 4

Prerequisites: Take MAT-050;

Corequisites:

This course is a comprehensive study of mathematical skills which should provide a strong mathematical foundation to pursue further study. Topics include principles and applications of decimals, fractions, percents, ratio and proportion, order of operations, geometry, measurement, and elements of algebra and statistics. Upon completion, students should be able to perform basic computations and solve relevant, multi-step mathematical problems using technology where appropriate.

MAT-061 Fast Track Essential Math 1 0 0 1

Prerequisites: Take MAT-050;

Corequisites:

This course is designed to offer a fast-paced, intensive review of skills taught in MAT 060. Emphasis is placed on working with signed numbers, problems involving proportions and per cents, as well as simplifying expressions and solving equations in algebra. Upon completion, students should be able to demonstrate mastery of pre-algebra computations and to solve relevant, multi-step problems.

MAT-070 Introductory Algebra 3 2 0 4

Prerequisites: Take MAT-060;

Corequisites:

This course establishes a foundation in algebraic concepts and problem solving. Topics include signed numbers, exponents, order of operations, simplifying expressions, solving linear equations and inequalities, graphing, formulas, polynomials, factoring, and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology.

MAT-071 Fast Track Introductory Algebra 1 0 0 1

Prerequisites: Take MAT-060;

Corequisites:

This course is designed to offer a fast-paced, intensive review of skills taught in MAT 070. Emphasis is placed on working with exponents, order of operations, simplifying algebraic expressions, solving linear equations and inequalities, graphing, formulas, polynomials, and factoring. Upon completion, students should be able to demonstrate mastery of introductory algebra concepts and apply these principles in solving problems.

MAT-080 Intermediate Algebra 3 2 0 4

Prerequisites: Take MAT-060 MAT-070;

Corequisites:

This course continues the study of algebraic concepts with emphasis on applications. Topics include factoring; rational expressions; rational exponents; rational, radical, and quadratic equations; systems of equations; inequalities; graphing; functions; variations; complex numbers; and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology.

MAT-095 Algebraic Concepts 3 0 0 3

Prerequisites: Take MAT-080;

Corequisites:

This course covers algebraic concepts with an emphasis on applications. Topics include linear, quadratic, absolute value,

rational and radical equations, sets, real and complex numbers, exponents, graphing, formulas, polynomials, systems of equations, inequalities, and functions. Upon completion, students should be able to apply the above topics in problem solving using appropriate technology.

MAT-110 Mathematical Measurement 2 2 0

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 provides an activity-based approach to utilizing, interpreting, and communicating data in a variety of measurement systems. Topics include accuracy, precision, conversion, and estimation within metric, apothecary, and avoirdupois systems; ratio and proportion; measures of central tendency and dispersion; and charting of data. Upon completion, students should be able to apply proper techniques to gathering, recording, manipulating, analyzing, and communicating data.

MAT-115 Mathematical Models 2 2 0 3

Prerequisites: 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 1 group; #Take MAT-070 MAT-060; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060;

#Take MAT-095; #Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050;

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 simplification, evaluation, and solving of algebraic and radical functions; complex numbers; right triangle trigonometry; systems of equations; and the use of technology. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate results.

MAT-122 Algebra/Trigonometry II 2 2 0 3

Prerequisites: 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-195; #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** 2 0 1 Prerequisites: Take 1 group; #Take MAT-070 MAT-060; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-195; #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 0 Take 1 group; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-095; #Take Prerequisites: MAT-120(S20803); #Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171(S20807); #Take MAT-175: #Take DMA MAT-141A Corequisites: 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. 0 2 0 **MAT-141A** Mathematical Concepts I Lab 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. 3 **MAT-142 Mathematical Concepts II** 3 0 Take MAT-141(S13022); Prerequisites: MAT-142A Corequisites: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/ mathematics. **MAT-142A Mathematical Concepts II Lab** 0 2 1 Prerequisites: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement. **MAT-145** 3 Take 1 group; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-095; #Take Prerequisites: MAT-120(S20803); #Take MAT-121(S20804); #Take MAT-161(S20916); #Take MAT-171(S20807); #Take MAT-175;

This course is designed to develop problem-solving and reasoning skills by the study of selected areas of mathematics.

Corequisites:

MAT-145A

**MAT-145A Analytical Math Lab** 0 2 0 1 Take 1 group; # Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-095; #Take Prerequisites: MAT-120(S20803); #Take MAT-121(S20804); # Take MAT-161(S20916); #Take MAT-171(S20807); # Take MAT-175; Corequisites: MAT-145 This course is a laboratory for MAT 145. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement. MAT-151 Statistics I 3 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; # ake MAT-120(S20803); Minimum grade C; #Take MAT-121(S20804); 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. 2 MAT-151A Statistics I Lab 0 0 1 Take 1 group; #Take MAT-080 MAT-060; Minimum grade C; # Take MAT-090 MAT-060; Minimum Prerequisites: grade C; # Take MAT-095; Minimum grade C; # Take MAT-120(S20803); #Take MAT-121(S20804) 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. 3 **MAT-155** Statistical Analysis 3 0 0 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); # ake MAT-175; 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** Take 1 group; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-095; # Take Prerequisites: MAT-120(S20803); # Take MAT-121(S20804); # Take MAT-161(S20916); #Take MAT-171(S20807); #Take MAT-175; MAT-155 Corequisites: 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 Take 1 group; #Take MAT-080 MAT-060; #Take MAT-090 MAT-060; #Take MAT-095; #Take Prerequisites: DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060 DMA-070 DMA-080:

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;

Corequisites:

**MAT-161A** 

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 MAT-080 MAT-060; # Take MAT-090 MAT-060; # Take MAT-095;

# Take DMA-010 DMA-020 DMA-030 DMA-040 DMA-050 DMA-060 DMA-070 DMA-080;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

MAT-167 Discrete Mathematics 3 0 0 3

Prerequisites: Take MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-280;

Corequisites: MAT-167A

This course is a study of discrete mathematics with emphasis on applications. Topics include number systems, combinations/permutations, mathematical logic/proofs, sets/counting, Boolean algebra, mathematical induction, trees/graphs, and algorithms. Upon completion, students should be able to demonstrate competence in the topics covered. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MAT-167A Discrete Mathematics Lab 0 2 0 1

Prerequisites: Take MAT-121(S13643) MAT-161(S16425) MAT-171(S11257) or MAT-280;

Corequisites: MAT-167

This course is a laboratory for MAT 167. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

MAT-171 Precalculus Algebra 3 0 0 3

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 DMA-070

DMA-080;

Corequisites: MAT-171A

This is the first of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on equations and inequalities, functions (linear, polynomial, rational), systems of equations and inequalities, and parametric equations. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and predictions.

MAT-171A Precalculus Algebra Lab 0 2 0 1

Prerequisites: 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 DMA-070

DMA-080;

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 0 0 3

Prerequisites: Minimum grade C; Take MAT-171(S11257);

Corequisites: MAT-172A

This is the second of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, vectors and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT-172A Precalculus Trigonometry Lab 0 2 0

Prerequisites: Minimum grade C; Take MAT-171(S11257);

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

**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 0 0 3

Prerequisites: Take MAT-161(S20916) MAT-171(S20807) or MAT-175; Minimum grade C;

Corequisites: MAT-263A

This course is designed for students needing only one semester of calculus. Topics include functions, graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic

calculus and technology to solve problems and to analyze and communicate results. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education corerequirement in natural sciences/mathematics.

**MAT-263A Brief Calculus Lab** 0 2 0 1

Prerequisites: Minimum grade C; Take MAT-161(S20916) MAT-171(S20807) or MAT-175;

Corequisites: MAT-263

This course is a laboratory for MAT 263. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

MAT-271 Calculus I 3 2 0 4

Prerequisites: Minimum grade C; Take MAT-172(S11061) or MAT-175;

Corequisites:

This course covers in depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable, with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT-272 Calculus II 3 2 0 4

Prerequisites: Minimum grade C; Take MAT-271;

Corequisites:

This course provides a rigorous treatment of integration and is the second calculus course in a three-course sequence. Topics include applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to use integration and approximation techniques to solve application problems. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**MAT-273 Calculus III** 3 2 0 4

Prerequisites: Minimum grade C; Take MAT-272;

Corequisites:

This course covers the calculus of several variables and is the third calculus course in a three-course sequence. Topics include functions of several variables, partial derivatives, multipleintegrals, solid analytical geometry, vector-valued functions, and line and surface integrals. Upon completion, students should be able to solve problems involving vectors and functions of several variables. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**MAT-280** Linear Algebra 3 0 0 3

Prerequisites: Minimum grade C; Take MAT-271;

Corequisites:

This course provides a study of linear algebra topics with emphasis on the development of both abstract concepts and applications. Topics include vectors, systems of equations, matrices, determinants, vector spaces, linear transformations in two or three dimensions, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts and appropriate use of linear algebra models to solve application problems. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MAT-285 Differential Equations 3 0 0 3

Prerequisites: Minimum grade C; Take MAT-272;

Corequisites:

This course provides an introduction to ordinary differential equations with an emphasis on applications. Topics include first-order, linear higher-order, and systems of differential equations; numerical methods; series solutions; eigenvalues and eigenvectors; Laplace transforms; and Fourier series. Upon completion, students should be able to use differential equations to model physical phenomena, solve the equations, and use the solutions to analyze the phenomena. null This

course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

#### **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-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-260 Fundamentals of Machine Design 2 3 0

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: 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-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

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.

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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
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 Prerequisites:
 Take BIO-161 ENG-111 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 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-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 Pr	<u>efix)</u>		
MKT-120 Prerequisites: Corequisites:	Principles of Marketing	3	0	0	3	
This course intro	oduces principles and problems of marketing goods tegies for products. Upon completion, students show ecision making.		-		•	nent,
MKT-123 Prerequisites: Corequisites:	Fundamentals of Selling	3	0	0	3	
This course is d placed on sales	esigned to emphasize the necessity of selling skills techniques involved in various types of selling situa understanding of the techniques covered.					
MKT-220 Prerequisites: Corequisites:	Advertising and Sales Promotion	3	0	0	3	
This course cov advertising and and means of te	ers the elements of advertising and sales promotion sales promotion appeals, selection of media, use of esting effectiveness. Upon completion, students should be through application.	advertisir	ng and sa	les promo	otion as a marketing	
consuming, and consumer behav	Consumer Behavior  esigned to describe consumer behavior as applied to disposing of goods and services. Topics include an avior with emphasis on the decision-making process. It to the study of the individual consumer.	n analysis	of basic	and envir	onmental determina	ints of
MKT-223 Prerequisites: Corequisites:	Customer Service	3	0	0	3	
This course stre respond to comp	esses the importance of customer relations in the buplex customer requirements and to efficiently handle of demonstrate the ability to handle customer relation	stressful	-	-		
placement, and	International Marketing ers the basic concepts of international marketing ac pricing strategies in the international marketing env a basic understanding of the concepts covered.					
	MEDICAL LABORATORY TECHNO	LOGY	(ML	Γ Prefix		
MLT-110 Prerequisites: Corequisites: This course intro	Introduction to MIt oduces all aspects of the medical laboratory profess	2 ion. Topic	3 cs include	0 health c	3 are/laboratory	

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perform basic laboratory skills.

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

**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

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.

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;

Coreguisites: 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)

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:

Coreguisites: 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.

MUSIC (MUS Prefix)

MUS-110 Music Appreciation 3 0 0

Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

MUS-111 Fundamentals of Music 3 0 0 3

Prerequisites: 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS-112 Introduction to Jazz 3 0 0 3

Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**MUS-113** American Music 3 0 0 3

Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**MUS-114 Non-Western Music** 3 0 0 3

Prerequisites: Take 1 group; #Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

MUS-121 Music Theory I 3 2 0 4

Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

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.

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**MUS-131 Chorus I** 0 2

Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS-133 Band I 0 2 0 1

Prerequisites: 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-135 Jazz Ensemble I 0 2 0 1

Prerequisites: Take MUS-135;

Corequisites:

This course provides an opportunity for those who play an appropriate instrument to gain experience playing in a jazz ensemble. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

MUS-136 Jazz Ensemble II 0 2 0 1

Prerequisites: Take 1 group; # Take RED-090 ENG-090 MUS-135; # Take ENG-111 MUS-135

Corequisites:

This course is a continuation of MUS 135. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major course requirement.

**MUS-141 Ensemble I** 0 2 0 1

Prerequisites:

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**MUS-151 Class Music I** 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-151D Class Music I Drums** 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-151G Class Music I:guitar 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 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-151V Class Music I Voice 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-152 Class Music II 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-161 Applied Music I

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Prerequisites:

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

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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

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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

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Prerequisites: Take

Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS-211 History of Country Music

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Prerequisites:

Take ENG-090 RED-090;

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

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Prerequisites:

Take 1 group; #Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

MUS-213 Opera and Musical Theatre

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Prerequisites: Corequisites:

Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

This course covers the origins and development of opera and musical theatre from the works of Claudio Monteverdi to the present. Emphasis is placed on how the structure and components of opera and musicals effect dramaturgy through listening examples and analysis. Upon completion, students should be able to demonstrate analytical and listening skills

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in understanding both opera and the musical. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

MUS-214 Electronic Music I 1

Prerequisites: Take MUS-111(S16443)

Corequisites:

This course provides an opportunity to study and explore various electronic instruments and devices. Emphasis is placed on fundamental MIDI applications and implementation, features and application of sequences, sound modules, and digital keyboards. Upon completion, students should be able to demonstrate proficiency by creation of appropriate musical projects using the equipment and techniques covered. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. 0 1 MUS-242 **Ensemble IV** 0 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. MUS-261 2 **Applied Music III** 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** 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. 3 0 3 MUS-271 Music History I Prerequisites: 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 3 0 3 Music History II 0 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** 3 3 6 **Nursing Assistant I** 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

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course.

necessary to qualify as Nursing Assistant I with the North Carolina Nurse Aide I Registry. null This is a certificate level

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NAS-102 Nursing Assistant II 3 2 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. null This course is restricted to diploma and/or certificate programs.

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. null This course is restricted to diploma and/or certificate programs.

**NAS-105** Life Span Changes 2 0 0 2

Prerequisites: Corequisites:

This course covers growth and development in relation to the human body throughout the life span. Topics include restorative care, safety, nutrition, and the physical, mental, and social aspects of the aging process. Upon completion, students should be able to understand the changes that occur throughout the life span. null This course is restricted to diploma and/or certificate programs.

**NAS-106 Geriatrics** 2 0 3 3

Prerequisites:

Corequisites:

This course is designed to cover health issues that affect the aging client. Emphasis is placed on social, physical, and psychological problems experienced by elderly people. Upon completion, students should be able to understand and provide care for the aging population. null This course is restricted to diploma and/or certificate programs.

#### **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:

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: NOS-230

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-235 Networking Troubleshooting 2 2 0 3

Prerequisites: Take NET-110(S10672);

Corequisites:

This course covers principles and techniques of troubleshooting hardware and software problems in a local area network. Topics include tools and methods, physical layer problems, server problems, and client problems. Upon completion, the student should be able to perform baseline LAN monitoring and to resolve common local area network problems.

**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 NOS-231; #Take NET-110(S21056) NOS-230 NOS-232; #Take

NET-110(S21056) NOS-220; #Take NET-125(S21095) NET-226(S21099)

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-271 Remote Access Networks 1 4 0 3

Prerequisites: Take NET-226(S21099);

Corequisites:

This course covers how to build a remote access network to interconnect central sites to branch offices, home offices, and telecommuters. Topics include enabling on-demand/ permanent connections to the central site, scaling and troubleshooting remote access networks, and maximizing bandwidth utilization over remote links. Upon completion, students should be able to assemble and configure equipment, establish WAN connections, enable protocols/technologies, allow traffic between sites, and implement accessible access control.

**NET-272 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.

#### **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 or CET-211(S21575);

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 or CET-211(S21575);

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 Linus/UNIX Admin 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

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.

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NOS-230 Windows Administration I 2 2 0 3

Prerequisites: Take NOS-130(S23023) or NOS-130(S20983)

Corequisites:

This course covers the installation and administration of a Windows Server network operating system. Topics include managing and maintaining physical and logical devices, access to resources, the server environment, managing users, computers, and groups, and Managing/ Implementing Disaster Recovery. Upon completion, students should be able to manage and maintain a Windows Server environment.

NOS-231 Windows Administration II 2 2 0 3

Prerequisites: Take NOS-230;

Corequisites:

This course covers implementing, managing, and maintaining a Windows Server network infrastructure. Topics include implementing, managing, and maintaining IP addressing, name resolution, network security, routing and remote access, and managing a network infrastructure. Upon completion, students should be able to manage and maintain a Windows Server environment.

NOS-232 Windows Administration III 2 2 0 3

Prerequisites: Take NOS-231;

Corequisites:

This course covers implementing and administering security in a Windows Server network. Topics include implementing, managing, and trouble shooting security policies, patch management infrastructure, security for network communications, authentication, authorization, and PKI. Upon completion, students should be able to implement, manage, and maintain a Windows Server network infrastructure.

NOS-240 Novell Administration I 2 2 0 3

Prerequisites: Take NOS-110;

Corequisites:

This course introduces students to the Novell network operating system. Topics include installing and using NetWare, managing printing, storage space, implementing internet services, and managing security. Upon completion, students should have basic knowledge about implementing NetWare and using its management tools.

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

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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

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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

0 6 5

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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

0 6 5

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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

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
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 Prerequisites:
 Take ENG-111 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-133 Advanced Keyboard Skill Building 1 2 0 2

Prerequisites: Take OST-132(S16487);

Corequisites:

This course is designed to increase speed and improve accuracy to meet employment tests and job requirements. Emphasis is placed on individualized diagnostic and prescriptive drills. Upon completion, students should be able to keyboard with greater speed and accuracy as measured by five-minute timed writings and skill-development paragraphs.

**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;

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;

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:

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-162 Executive Terminology 3 0 0 3

Prerequisites:

Corequisites:

This course is designed to increase and improve proficiency in word usage. Topics include root words, prefixes, suffixes, homonyms, synonyms, and specialized vocabularies. Upon completion, students should be able to use acquired vocabulary skills in the global workplace.

OST-164 Text Editing Applications 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111;

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 coworkers 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 Processing 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-242 Medical Office Transcription II 1 2 0 2

Prerequisites: Take OST-241;

Corequisites:

This course continues building transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription and text editing, efficient use of reference materials, increasing transcription speed and accuracy, and improving understanding of medical terminology. Upon completion, students should be able to display competency in accurately transcribing medical documents.

OST-243 Med Office Simulation 2 2 0 3

Prerequisites: 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) or OST-134(S16488);

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) OST-181(S12232);

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); # Take OST-164; # Take

OST-134(S22142) or OST-136(S22144);

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. null This course is restricted to diploma and/or certificate programs.

**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. null This course is restricted to diploma and/or certificate programs. PROCESS CONTROL INSTRUMENTATION (PCI Prefix) **PCI-170 DAQ and Control** 0 4 Prerequisites: Corequisites: 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-261 **Process Measurement** 2 3 Prerequisites: Take PCI-170; 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. 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. **PED-111 Physical Fitness I** 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 0 3 0 1 Physical Fitness II Take PED-111; Prerequisites: 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-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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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** 0 2 1 **Golf-Beginning** 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. PED-130 0 2 0 **Tennis-Beginning** 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. 0 PED-131 **Tennis-Intermediate** 2 0 1 Take PED-130: Prerequisites: 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-139** 0 2 0 1 **Bowling-Beginning** 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. 0 PED-142 Lifetime Sports 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 0 2 0 1 Volleyball-Beginning 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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement

**PED-145** 0 2 0 **Basketball-Beginning** 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-154 0 3 0 **Swimming for Fitness** 1 Prerequisites: Corequisites: This course introduces lap swimming, aquacises, water activities, and games. Emphasis is placed on increasing cardiovascular efficiency through aquatic exercise. Upon completion, students should be able to develop an individualized aquatic fitness program. **PED-177** 0 2 1 Ice Skating 0 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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. O **PED-186** 2 1 **Dancing for Fitness** 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** 0 1 Ju-Jitsu 0 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. 0 **PED-239 Kickboxing** 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: Minimum grade C; Take ENG-111; 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 3 Prerequisites: Minimum grade C; Take ENG-111; 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-221 Western Philosophy II

3 0 0 3

Prerequisites: Minimum grade C; Take ENG-111;

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: Minimum grade C; Take ENG-111;

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: Minimum grade C; Take ENG-111;

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-250 Philosophy of Science

3 0 0 3

Prerequisites: Take 1 group; # Take ENG-111 MAT-161(S20916); Minimum grade C; # Take ENG-111 MAT-171(S20807); Minimum grade C; # Take ENG-111 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

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** 

15

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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

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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

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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** 

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

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

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-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-151 College Physics I 3 2 0 4

Prerequisites: Take MAT-161(S20916) MAT-171(S20807) or MAT-175; Minimum grade C; Take MAT-161(S20916)

MAT-171(S20807) or MAT-175;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY-152 College Physics II 3 2 0 4

Prerequisites: Minimum grade C; 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 electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**PHY-251 General Physics I** 3 3 0 4

Prerequisites: Minimum grade C; Take MAT-271;

Corequisites: MAT-272

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.

PHY-252 General Physics II 3 3 0 4

Prerequisites: Minimum grade C; Take MAT-272 PHY-251;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

#### 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-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,

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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

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 (PLA Prefix)**

PME-111 Planters and Sprayers 2 6 0 4

Prerequisites:

Corequisites:

This course introduces planters and sprayers as used in modern agriculture. Topics include setup, calibration, tractor preparation, attachment hardware, and environmental issues. Upon completion, students should be able to set up, adjust, and calibrate sprayers and planters and set up tractors to accommodate attachment hardware.

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.

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3 2 Prerequisites: Corequisites: This course introduces garden tractors, equipment, and attachments. Topics include electrical, hydraulic, and power trains and the operation, diagnosis, adjustment, and repair of lawn and turf equipment. Upon completion, students should be able to set up, adjust, diagnose, and repair lawn and garden equipment. **PME-112 Consumer Products** 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** 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 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** 1 2 0 2 **Undercarriage Components** 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. 2 **PME-121** 0 3 **Component Controls** Prerequisites: Corequisites: This course covers specific operating controls used on modern equipment. Emphasis is placed on the hydraulic and mechanical controls used on power trains. Upon completion, students should be able to identify, diagnose, adjust, and repair control systems used on modern equipment. **PME-121** 1 0 2 **Component Controls** 3 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:

**PME-112** 

**Consumer Products** 

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** 

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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

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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

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Prerequisites:

Take 1 group; # Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**POL-120 American Government** 

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Take 1 group; # Take RED-090 ENG-090; #Take ENG-111; Prerequisites:

Corequisites:

This course is a study of the origins, development, structure, and functions of American national government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**POL-130 State & Local Government** 

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Prerequisites:

Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**POL-210 Comparative Government** 

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Prerequisites:

Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

#### 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

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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

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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

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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

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Prerequisites:

Take 1 group; # Take ENG-090 RED-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

PSY-215 Positive Psychology

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Prerequisites: Take

Take PSY-150;

Take PSY-150;

Corequisites:

This course is an overview of the scientific study of human strengths. Topics include resilience, optimism, vital engagement (flow), positive relationships, creativity, wisdom, happiness, empathy, emotional intelligence, and other relevant topics. Upon completion, students should be able to demonstrate an understanding of the psychological factors relevant to enhancing well being.

PSY-231 Forensic Psychology

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Prerequisites: 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: Minimum grade C; Take PSY-150 or SOC-210;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

PSY-239 Psychology of Personality 3 0 0 3

Prerequisites: Minimum grade C; Take PSY-150;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

PSY-241 Developmental Psychology 3 0 0 3

Prerequisites: Minimum grade C; Take PSY-150;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**PSY-259 Human Sexuality** 3 0 0 3

Prerequisites: Minimum grade C; Take PSY-150;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

PSY-263 Educational Psychology 3 0 0 3

Prerequisites: Minimum grade C; Take PSY-150;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

PSY-281 Abnormal Psychology 3 0 0 3

Prerequisites: Minimum grade C; Take PSY-150;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**Psychological Statistics PSY-285** 3 0 0 3

Prerequisites: Take PSY-150 MAT-161(S16425);

Corequisites:

This course introduces the study of descriptive and inferential statistics and their use in psychological research. Topics include measures of central tendency, variability and correlation, probability, sampling, hypothesis testing, and analysis of variance. Upon completion, students should be able to use statistical methods in the analysis of psychological data.

#### PHARMACEUTICAL TECHNOLOGY (PTC Prefix)

PTC-110 **Industrial Environment** 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 O 4

Take PTC-110 MAT-121(S12145); Prerequisites:

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 0 3 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.

PTC-210 **Pharmaceutical Industrial Processes** 3 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.

2 PTC-212 **Applied Microbiology** 3 0 4

Prerequisites: Take BIO-110 or BIO-111;

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 3 **Parenteral Processes** 4

Prerequisites:

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

Coreguisites: RAD-112 RAD-161

This course provides the principles of conventional film-screen radiography. Emphasis is placed on the factors that impact density, contrast, recorded detail, and distortion. Upon completion, students should be able to demonstrate an understanding of conventional film-screen radiographic imaging.

RAD-122 Radiographic Imaging II 1 3 0 2

Prerequisites: 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-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-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-241 Radiobiology/Protection 2 0 0 2

Prerequisites: Take RAD-122(S13744) RAD-131(S11316) RAD-171;

Coreguisites: 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;

Coreguisites: 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-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

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.

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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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

REL-111 Eastern Religions 3 0 0 3

Prerequisites: Take 1 group; #Take RED-090 ENG-090; #Take ENG-111;

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;

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. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

REL-211 Introduction to Old Testament 3 0 0 3

Prerequisites: Take 1 group; #Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

REL-212 Introduction to New Testament 3 0 0 3

Prerequisites: Take 1 group; # Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

REL-221 Religion in America 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

#### 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 ENG-090 RED-090;

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 ENG-090 RED-090 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 ENG-090 RED-090;

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 ENG-090 RED-090;

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 ENG-090 RED-090; Take HSE-112;

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 ENG-090 RED-090;

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** 3 0 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-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 SEC-110(S21053); # Take NET-110(S21056) or 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 SEC-110(S21053); # Take NET-110(S21056) or 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-170 Small Office/Home Office Security 2 2 0 3

Prerequisites: Take SEC-110(S21053);

Corequisites:

This course introduces security principles and topics related to the small office/home office networking environment. Topics include network topologies, network protocols, security issues, and best practices for SOHO environments. Upon completion, students should be able to design, setup, secure, and manage a small office/home office network. null This course is restricted to the Information Systems Security/Operating Systems curriculum.

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-230 Attack Methodology 3 2 0 4

Prerequisites: Take SEC-220;

Corequisites:

This course provides the student with an in-depth look at common Internet, network, and host-based attack methodologies. Topics include attack methods such as social engineering, spoofing, denial of service, man-in-the-middle, session hijacking, password cracking, malicious code, and web hacking techniques. Upon completion, students should be able to generate anomalous network traffic, identify common network attack patterns, and perform penetration testing. null This course is restricted to the Information Systems Security/Operating Systems curriculum.

SEC-240 Wireless Security 2 2 0 3

Prerequisites: Take SEC-110(S21053) NET-175(S21097);

Corequisites:

This course introduces security principles and topics related to the wireless networking environment. Topics include network topologies, network protocols, security issues, and best practices for wireless environments. Upon completion, students should be able to design, setup, manage, and secure a wireless network.

SEC-260 Security Administration II 2 2 0 3

Prerequisites: Take SEC-160;

Extra:

Corequisites:

This course provides the skills necessary to design and implement information security controls. Topics include advanced networking and TCP/IP concepts, network vulnerability analysis, and monitoring. Upon completion, students should be able to distinguish between normal and anomalous network traffic, identify common network attack patterns, and implement security solutions.

SEC-270 Secure Routing/Firewalls 1 4 0 3

Prerequisites: 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-275 Advanced Firewalls 3 2 0 4

Prerequisites: Take SEC-270;

Corequisites:

This course covers advanced topics in securing networks using firewalls. Topics include networking protocols; firewall status and configuration; syslog configuration; security levels; NAT/PAT; access control lists; authentication, authorization and accounting; VPN; and remote access. Upon completion, students should be able to describe, configure, verify, and manage firewall technologies. 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. null This course is restricted to the Information Systems Security, the Information Systems Security/Operating Systems, and the Information Systems Security/Security Hardware curriculums.

#### 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:

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 1 group; # Take MAT-121(S20804) SGD-113; # Take MAT-121(S20804) CSC-134(S21066);

#Take MAT-121(S20804) CSC-151; #Take MAT-161(S20916) SGD-113; #Take MAT-161(S20916)

CSC-134(S21066); #Take MAT-161(S20916) CSC-15

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-123 Windows and Console Programming 2 3 0 3

Prerequisites: Take SGD-113;

Corequisites:

This course introduces the concepts of Windows and Console Programming. Emphasis is placed on learning MS Windows, the operating systems of various consoles and programming techniques. Upon completion, students should be able to demonstrate an understanding of Windows and of various consoles' operating systems.

SGD-124 Massive Multiplayer Online Programming 2 3 0 3

Prerequisites: Take SGD-113 CSC-134(S21066) or CSC-151;

Corequisites:

This course introduces the concepts of Massive On-line Programming for simulations and games. Emphasis is on learning Massive Multiplayer On-line simulation and game programming techniques. Upon completion, students should be able to create Massive Multiplayer On-line simulation or game.

SGD-125 Simulation and Game Artificial Intelligence 2 3 0

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-126 Simulation and Game Engine Design 2 3 0 3

Prerequisites: Take SGD-113 CSC-134(S21066) or CSC-151;

Corequisites:

This course introduces the techniques needed to design and create a simulation/game engine. Emphasis is placed on learning core techniques used to design and create simulation and/or game engines. Upon completion, students should be able to design and create a simulation or game engine.

**SGD-134 SG Quality Assurance** 2 2 0 3

Prerequisites: 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;

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

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;

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

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;

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-169 Linux Simulation and Game Programming 2 3 0 3

Prerequisites: Take SGD-113 CSC-134(S21066) or CSC-151;

Corequisites:

This course introduces the concepts of Linux programming for use in simulation and game development. Emphasis is placed on Linux programming and tools. Upon completion, students should be able to create a simple game or simulation using Linux.

SGD-170 Handheld Simulation and Game Programming 2 3 0 3

Prerequisites: Take SGD-113 CSC-134(S21066) or CSC-151;

Corequisites:

This course introduces the concepts of hand-held simulation and game development. Emphasis is placed on hand-held game API, including stylus input, system buttons, infrared communications audio/visual creation and the physics of hand-held game API. Upon completion, students should be able to create a simple simulation or game for a hand-held device.

SGD-171 Flash 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-172 Virtual Simulation and Game Environments 2 3 0 3

Prerequisites:

Corequisites:

This course covers the use of virtual reality tools and techniques in simulation and game development. Emphasis is placed on acquiring the skills necessary to create scalable virtual characters and environments for use in simulations and games. Upon completion, students should be able to create a simple game or simulation in a virtual environment.

SGD-173 Lighting and Shading Algorithms 2 3 0 3

Prerequisites: Take SGD-214;

Corequisites:

This course introduces the concepts of various lighting and shading algorithms for use in simulation and game development. Topics include various tools used to create light and shadows. Upon completion, students should be able to apply knowledge of various lighting and shading algorithms to the creation of simulation and games.

SGD-174 Simulation and Game Level Design 2 3 0 3

Prerequisites: 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 Desing II 2 3 0 3

Prerequisites: Take SGD-112;

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-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-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

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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

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

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

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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

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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

4

Take SGR-131;

Prerequisites: 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** 

3

Prerequisites:

Corequisites:

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

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Prerequisites: 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

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Prerequisites:

Take 1 group; #Take RED-090 ENG-090; # Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SOC-213 Sociology of the Family

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Prerequisites: Take 1 group; # Take RED-090 ENG-090; #Take ENG-111;

Take SGR-251 SGR-261 or SGR-271;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SOC-220 Social Problems

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Prerequisites: Take 1 group; # Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SOC-225 Social Diversity

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Prerequisites: Take 1 group; # Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SOC-230 Race and Ethnic Relations

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Prerequisites: Corequisites:

Take 1 group; #Take RED-090 ENG-090; #Take ENG-111;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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;

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**SOC-252 Sociology of Work** 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111;

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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

### SPANISH (SPA Prefix)

**SPA-111 Elementary Spanish I** 3 0 0 3

Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111;

Corequisites: SPA-181

This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

SPA-112 Elementary Spanish II 3 0 0 3

Prerequisites: Minimum grade C; Take SPA-111;

Corequisites: SPA-182

This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

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;

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 area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate understanding of cultural differences.

**SPA-181 Spanish Lab 1** 0 2 0 1

Prerequisites: Take 1 group; # Take ENG-090 RED-090; #Take ENG-111;

Corequisites: SPA-111

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**SPA-182 Spanish Lab 2** 0 2 0 1

Prerequisites: Minimum grade C; Take SPA-181;

Corequisites: SPA-112

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate cultural awareness. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPA-211 Intermediate Spanish I 3 0 0 3

Prerequisites: Minimum grade C; Take SPA-112;

Corequisites: SPA-281

This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

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. null This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

SPA-221 Spanish Conversation 3 0 0 3

Prerequisites: Take SPA-212;

Corequisites:

This course provides an opportunity for intensive communication in spoken Spanish. Emphasis is placed on vocabulary acquisition and interactive communication through the discussion of media materials and authentic texts. Upon completion, students should be able to discuss selected topics, express ideas and opinions clearly, and engage in formal and informal conversations. null This course has been approved to satisfy the Comprehensive Articulation Agreement premajor and/or elective course requirement.

**SPA-281 Spanish Lab 3** 0 2 0 1

Prerequisites: Minimum grade C; Take SPA-182;

Corequisites: SPA-211

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

**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. null This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

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-111 Surveying II** 2 6 0 4

Prerequisites: Take SRV-110(S12339);

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-112 Landscape Arch Surveying 2 6 0 4

Prerequisites: Take MAT-101(S12623) MAT-110(S13563) MAT-115(S13541) MAT-120(S12252) MAT-121(S13643)

MAT-161(S16425) MAT-171(S11257) or MAT-175;

Corequisites:

This course covers surveying techniques commonly used by landscape architects and contractors. Topics include boundary and topographic surveying. Upon completion students should be able to create boundary and topo maps and layout construction projects both on paper and in the field.

**SRV-210 Surveying III** 2 6 0 4

Prerequisites: Take 1 group; # Take CIV-125(S21521) SRV-110(S22362); #Take SRV-293 SRV-110(S22362);

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 1 group; # Take CIV-125(S21521) SRV-110(S22362); # Take SRV-293 SRV-110(S22362);

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;

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:

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; Coreguisites: 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.

405

**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.

#### 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-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-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.

#### WEB TECHNOLOGIES (WEB Prefix)

WEB-110 Internet/Web Fundamentals 2 2 0 3

Prerequisites: Take RED-090 or ENG-111;

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: 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 1 group; # Take RED-090 MAT-060; # Take ENG-111 MAT-060; # Take RED-090

DMA-050; # Take ENG-111 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-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-183
 Perl Programming
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 Prerequisites:
 Take 1 group; # Take WEB-115(S22059) CIS-115(S21061); #Take CSC-160(S21549)

CIS-115(S21061)

Corequisites:

This course introduces students to the Perl Programming language. Topics include programming techniques using CGI script, input/output operations, sequence, iteration, selection, arithmetic operations, subroutines, modules, integrating database, pattern matching and other related topics. Upon completion, students should be able to design, code, test, and debug Perl language programs.

 WEB-185
 ColdFusion Programming
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 Prerequisites:
 Take 1 group; #Take WEB-115(S22059) CIS-115(S21061); #Take CSC-160(S21549)

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-186 XML Technology 2 2 0 3

Prerequisites: Take 1 group; #Take CIS-115(S21061) WEB-110(S22058); #Take CIS-115(S21061) CIS-172;

Take CIS-115(S21061);

Corequisites:

This course is designed to introduce students to XML and related internet technologies. Topics include extendible style language (XSL) document object model (DOM), extendible stylesheet language transformation (XSLT), and simple object access protocol (SOAP). Upon completion, students should be able to create a complex XML document.

WEB-187 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;

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);

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-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-220 Advanced Multimedia 2 2 0 3

Prerequisites: Take WEB-120 or ITN-120

Corequisites:

This is the second of two courses covering internet multimedia. Topics include use of advanced internet multimedia applications. Upon completion, students should be able to create interactive Internet multimedia presentations.

WEB-225 Content Management 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-230 Implementing Web Servers 2 2 0 3

Prerequisites: Take NET-110(S21056) or NET-125(S21095);

Corequisites:

This course covers website and web server architecture. Topics include installation, configuration, administration, and security of web servers, services and sites. Upon completion, students should be able to effectively manage the web services deployment lifecycle according to industry standards.

WEB-250 Database Driven Websites 2 2 0 3

Prerequisites: Take DBA-110;

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;

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 1 group; #Take WEB-180(S22060) WEB-250(S22280); #Take ITN-180 WEB-250(S22280);

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 ecommerce Internet web site.

WEB-285 Emerging Web Technologies 2 2 0 3

Prerequisites:

Corequisites:

This course will explore, discuss, and research emerging technologies in the web arena. Emphasis is placed on exposure to up-and-coming technologies relating to the web, providing hands-on experience, and discussion of practical implications of these emerging fields. Upon completion, students should be able to articulate issues relating to these technologies.

**WEB-287 Web E-Portfolio** 1 2 0 2

Prerequisites: 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-289 Internet Technologies Project 1 4 0 3

Prerequisites: Take WEB-230 WEB-250(S21132);

Corequisites:

This course provides an opportunity to complete a significant Web technologies project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete an Internet project from the definition phase through implementation.

WEB-298A Seminar in Web Technology 2 2 0 3

Prerequisites:

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-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-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 & 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-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.

#### **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.

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### .......

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Samuel Strickland III, M.A	Senior Vice President, Economic & Workforce Development

## **Curriculum and Continuing Education Faculty**

Albahrawy, Diane, J.D.	
Albing, Virginia A., M.A.	Instructor/Coordinator Individualized Learning Center
Albright, Tammy, A.A.S., CMA (AAMA)	Instructor, Medical Assisting
Alford, Latisha, M.S.	Instructor, Human Resources Development
Algood, Willeena J., M.Ed, R.N.	Instructor, Nursing
Allen, DeeDee A., Ph.D.	Instructor, Chemistry
Allen, Kathryn, Ph.D.	Instructor/Recruiter/Retention Specialist, Basic Skills
Allen, Phyllis A., B.S.	Instructor, Pre-Curriculum Mathematics
Anderson, Erin O'Brien, B.A.	Instructor, Spanish
Anderson, Jamie L., M.A.	Instructor, English
Andreaus, Kimberly H., M.S.W., LCSW	Instructor, Human Services Technology
Angell, Laura, B.A.	Instructor, Simulation and Game Development
Annis, John G., M.P.A.	Instructor, Criminal Justice
Annel Kimherly P M A	Instructor, Psychology
Appel, Milliberry I., M.A.	
Archambault, Michel B., M.S.	
	Instructor/Recruiter/Retention Specialist
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Bowen, Jimmy, M.S.	

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Budd, Benita A., M.A.	Instructor, English
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Clark, Timothy, M.S.	Instructor, Geology
Clarke, Kimberly E., M.S., M.S.C., R.N.	Instructor, Nursing
Clayton, Jo Anne, M.S.	Instructor, Sociology
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Clower, Dan F., B.F.A.	Instructor, Correction Education
Cofiori, Joseph A., B.A.	Instructor, Military Science
Cohen, Scott R., M.B.A., M.S.	Instructor, Accounting
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Cowper, Edith D., M.A.	Instructor/Recruiter Retention Specialist
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Cui, Hong, M.S.	Instructor, Information Systems
Cunningham, Maureen G., M.Ed.	Instructor, Pre-Curriculum
Cylar, Michael A., B.S.	

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Daniel, Linda, M.S.	
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Dawson, Debra A., M.A.	
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Deaton, Brenda G., B.S.	
Dees, Lori A., M.A	
Degen, Daniel, B.S.	
DeMarco, Leslie, A.A.S.	
Dennis, Phillip S., M.A., M.B.A., Master of Healt	h Administration
DeSimone, Carolyn G., A.A.S.	
Deyneka, Alexandra, M.A	
Dix, Alissa B., B.S.	
Dixit, Ajit S., Ph.D.	
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Donaldson, William C., M.S.	
Doody, Thomas, M.A.	
Doody, Susan M., M.A.	
Duke, Rodney A., A.A.S.	
Dunn, Timothy E., M.S.	
Eaton, Kimberly L., Ph.D.	
Eddington, Lora M., M.S., M.B.A	Instructor, Pre-Engineering
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Hinson, Dianne B., M.A	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  P) Instructor/Department Head, Medical Laboratory Technology and Phlebotomy
Hinson, Dianne B., M.A.  Hinton, Clifton E., B.S.  Horton, Pamela B., M.Ed., MT(ASC  Huggins, Regina M., B.S.  Isley, Samuel W., M.B.A.	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  Instructor/Department Head, Medical Laboratory Technology and Phlebotomy  Dean, Financial Aid & Veterans Affairs
Hinson, Dianne B., M.A.  Hinton, Clifton E., B.S.  Horton, Pamela B., M.Ed., MT(ASC  Huggins, Regina M., B.S.  Isley, Samuel W., M.B.A.  Jenkins, Paul F., M.S.	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  P) Instructor/Department Head, Medical Laboratory Technology and Phlebotomy  Dean, Financial Aid & Veterans Affairs  Interim Department Head/Instructor, Accounting
Hinson, Dianne B., M.A.  Hinton, Clifton E., B.S.  Horton, Pamela B., M.Ed., MT(ASC  Huggins, Regina M., B.S.  Isley, Samuel W., M.B.A.  Jenkins, Paul F., M.S.  Kalbaugh, Laura Marie, M.Ed.	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  Instructor/Department Head, Medical Laboratory Technology and Phlebotomy  Dean, Financial Aid & Veterans Affairs  Interim Department Head/Instructor, Accounting  Director of Distance Education for Continuing Education
Hinson, Dianne B., M.A.  Hinton, Clifton E., B.S.  Horton, Pamela B., M.Ed., MT(ASC  Huggins, Regina M., B.S.  Isley, Samuel W., M.B.A.  Jenkins, Paul F., M.S.  Kalbaugh, Laura Marie, M.Ed.  Kavcsak, Lynn E., M.S.	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  P) Instructor/Department Head, Medical Laboratory Technology and Phlebotomy  Dean, Financial Aid & Veterans Affairs  Interim Department Head/Instructor, Accounting  Director of Distance Education for Continuing Education  Dean, Academic Success & Transition Resources Division
Hinson, Dianne B., M.A.  Hinton, Clifton E., B.S.  Horton, Pamela B., M.Ed., MT(ASC  Huggins, Regina M., B.S.  Isley, Samuel W., M.B.A.  Jenkins, Paul F., M.S.  Kalbaugh, Laura Marie, M.Ed.  Kavcsak, Lynn E., M.S.  Keeton, Cheryl L., Ed.D.	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  P) Instructor/Department Head, Medical Laboratory Technology and Phlebotomy  Dean, Financial Aid & Veterans Affairs  Interim Department Head/Instructor, Accounting  Director of Distance Education for Continuing Education  Dean, Academic Success & Transition Resources Division  Associate Dean of Career & Employment Resources
Hinson, Dianne B., M.A.  Hinton, Clifton E., B.S.  Horton, Pamela B., M.Ed., MT(ASC  Huggins, Regina M., B.S.  Isley, Samuel W., M.B.A.  Jenkins, Paul F., M.S.  Kalbaugh, Laura Marie, M.Ed.  Kavcsak, Lynn E., M.S.  Keeton, Cheryl L., Ed.D.	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  Instructor/Department Head, Medical Laboratory Technology and Phlebotomy  Dean, Financial Aid & Veterans Affairs  Interim Department Head/Instructor, Accounting  Director of Distance Education for Continuing Education  Dean, Academic Success & Transition Resources Division  Associate Dean of Career & Employment Resources  Dean, Mathematics & Sciences Division
Hinson, Dianne B., M.A.  Hinton, Clifton E., B.S.  Horton, Pamela B., M.Ed., MT(ASC  Huggins, Regina M., B.S.  Isley, Samuel W., M.B.A.  Jenkins, Paul F., M.S.  Kalbaugh, Laura Marie, M.Ed.  Kavcsak, Lynn E., M.S.  Keeton, Cheryl L., Ed.D.  Law, Dina M., M.A.  Ledbetter, Ernestine D., M.Ed.  Lineback, William B., B.S., Credel Support, Pediatric Advanced Life S	Technology  Dean, Health Sciences Campus  Instructor/Department Head, Environmental Science Technology and BioPharmaceutical Technology  Instructor/Department Head, Medical Laboratory Technology and Phlebotomy  Dean, Financial Aid & Veterans Affairs  Interim Department Head/Instructor, Accounting  Director of Distance Education for Continuing Education  Dean, Academic Success & Transition Resources Division  Associate Dean of Career & Employment Resources  Dean, Mathematics & Sciences Division  Administrative Department Head, Fine Arts

Little, Pamela M., M.S.	Dean, Evening Division
Lodder, Diane E., Ph.D.	Dean, Arts, Humanities & Social Sciences
Lowe, Ronald A., A.A.S., A.G.E.	Instructor/Department Head, Heavy Equipment and Transport Technology
Lucas, Timothy, M.B.A,	Dean, Business & Industry Services
Mace, Andrea V., B.S.	Director, Special Projects & Educational Programs
Maddox, Brenda P., RDH, M.S.	Instructor/Department Head, Dental Hygiene
Martin, Walter E., M.B.A.	Dean, Business & Public Service Technologies
McClanahan, Ana M., M.S.	Dean, Bionetwork Capstone Center
McCullough, Patricia, M.A	
McMillian, Sharon W., M.S.	Instructor/Department Head, Individualized Learning Center
Meardon, Susan L., M.S.	Instructor/Department Head, Pre-Engineering
Mims, Lonette E., B.A.	Dean, Occupational Services Division
Mizelle, Angela J., B.S.	
Moose, Lee R., M.Div.	
Morabito, Nancy F., B.A.	Director, Compensatory Education
Neagle, Rebecca, M.A.	Associate Department Head, English
Osborne, Diana G., B.A.S.	
Overington, Ellen H., M.A.	
Palmer, Faith, M.A.	
Parker, Charmaine, M.S., L.P.N.	Instructor/Department Head, Medical Assisting
Pearson, Anita M., M.A.	Director of Adult High School & Student Services
Phinazee, Karen Beatty, M.A	Dean of Students & Student Conduct Officer, Northern Wake Campus
Randall, Gary R., A.A.S., N.C. Electrical Contracto	rs License
Ray, Karen I., M.Ed.	Instructional Department Head, Early Childhood Education
Rea, Carolyn S., M.A., NCC	Instructor/Department Head, Human Services Technology
Richman, Lisa M., M.S.	Director, Mobile Lab Operations
Roberts, Amanda, M.A.	Dean, Curriculum Registrar, Registration & Records
Roberson, James A., M.L.S.	
Roberton, Margaret R., M.B.A.	Dean, Continuing Education Registration & Records

Rosen, Paula S., M.S.	Instructor/Department Head, Office Administration
Schilz, Baerbel, M.A.	Director, Assessment/Retention and Training
Shurtleff, Martha A., M.S., R.N.	Instructor/Department Head, Surgical Technology
Slaughter, Janie J., M.A.	Instructor/Department Head, Criminal Justice
Smith, Elizabeth, M.A.	Administrative Department Head, Social Sciences
St. Aubin, Shelley, M.A.	Director of Student Services
Street, Barry, M.S.	
Swann, Steven D., M.A.	Instructor/Department Head, English as a Foreign Language
Terrill, Marilyn E., M.A.	Administrative Department Head, Business Technologies
Terrill, William L., M.Ed.	Director, Apprenticeship/FIT
Tims, Ray L., M.A.	Dean, Education Services & Technology Division
Umphlett, Rebel Bradford, M.S.	Director, Aseptic & Lab Operations
Underwood, David E., A.G.E., N.C. State Plumbing Contracto	or LicenseInstructor/Department Head, Plumbing
Valdillez, Jeralyn V., M.A.	Associate Department Head
Wang, Kai, Ph.D.	Senior Dean, Strategic Innovations
Wahrman, Russell, A.A.S.	Instructor/Department Head, Welding Technology
Washington, Thu, M.Ed.	Director of Student Success
Weeks, Kathy T., M.S., R.N.	Instructor/Department Head, Nursing
Welker, Sharon F., M.A., M.Ed.	Administrative Department Head, Mathematics and Physics
Wells, Samuel, A.A.S.	
White, Cathy L., M.P.Aff.	
Willis, Regina, M.S.	Director, Disability Support Services
Wirt, Jonathan, M.Div.	Associate Dean, Student Development
Wood, Deborah J., M.Ed., R.T. (R)(M) (ARRT)	Instructor/Department Head, Radiography
Yarley, David H., M.S.	Director of BTEC Training
Zullo, Matthew D. J.D.	Instructor/Department Head, Computer Information Technology



A directory of Wake Technical Community College's staff, faculty, and contact information, can be found in the **Searchable Online Directory** at <a href="http://www.waketech.edu/directory-search">http://www.waketech.edu/directory-search</a>

# Wake Technical Community College Contact Information

CERVICE/LOCATION	WED ADDRESS	BUONE
SERVICE/LOCATION Main Campus: 9101 Fayetteville Road (401 S), Raleigh, NC 27603	WEB ADDRESS  http://www.waketech.edu/about-wake-tech/locations/main-campus	919-866- 5000
Health 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 Personnel Development Center (SPDC): 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
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
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_hig hschool	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

# **Wake Tech- 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	Holding Hall, Room 108C http://www.waketech.edu/about-wake-tech/careers- employment/careers	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)
Cooperative Education	Holding Hall, Room 108C http://www.waketech.edu/about-wake-tech/careers- employment/careers	919-866-5694
Counseling: Student Success	Student Services, Room 143 http://www.waketech.edu/student-services/counseling- services	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, Computer, Foreign Language Help, & tutoring)	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	Student Services Building, Room 243 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 128 http://www.waketech.edu/student-services/veterans- affairs	919-866-5417

# **Wake Tech – Northern Wake Campus Information**

SERVICE	NORTHERN WAKE CAMPUS (401 North)	PHONE
Advising/Admissions	Bldg. A – 2 <sup>nd</sup> Floor Front Desk	919-532-5502
Campus Police	Bldg. B- Room 234	919-866-5911
Cashier's Office	Bldg. A - Room 236C	919-532-5507
College Bookstore	Bldg. B - Room 225 or online at http://www.waketech.edu/student-services/wake-tech-bookstore	919-790-9306
Counseling: Student Success Counseling	Bldg. A – 2 <sup>nd</sup> Floor Front Desk	919-532-5502
Disability Support Services:	Bldg. A - Room 315	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, and Foreign Language tutoring) Student I.D. Required	Bldg. B - Room 213 http://www.waketech.edu/student- services/individualized-learning-center	919-532-5548
<b>Library</b> 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 - 2 <sup>nd</sup> Floor Front Desk	919-532-5574
SGA (Student Activities)	Bldg. D - Room 206B	919-532-5654
Veteran's Information	Bldg. A – Room 322 Wednesday, 9:00 am – 1:00 pm	919-866-5417
OPEN COMPUTER AREAS  Northern Wake Library  Student I.D. Required  Computers for research only  Microsoft Office available	Bldg. B - Room 239 http://www.waketech.edu/student- services/libraries	919-532-5550
Open Computer Lab Student I.D. Required Microsoft Office and other applications available	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

# **Wake Tech – 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
Counseling: Student Success	Student Service Center Front Desk	919-747-0103
Disability Support Services:	HS2 Building	919-747-0406
Financial Aid	HS 2 Student Service Center Room 15	919-747-0106
Individualized Learning Center (Reading, Writing, Math, Computer and Health Science Skills lab, & tutoring) Student I.D. Required	Individualized Learning Center Building 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)	Student Services Center Room 04	919-747-0106
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 CONTINUING EDUCATION	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)
Registration	Health Education Building	919-747-0400

# Wake Tech – Western Wake Campus Information

SERVICE	WESTERN WAKE CAMPUS	PHONE
Advising/Admissions	Abby Littlefield, Room 255	919-335-1050
Campus Police	(contact 1 <sup>st</sup> floor receptionist) 919-335-1000	919-866-5911
Cashier's Office	Room 100A	919-335-1049
Financial Aid	Room 255C, Tuesday 10am – 12pm	919-335-1040
Individualized Learning Center (Reading, Writing, Math, Computer, and Foreign Language 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 Microsoft Office and other applications available	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)	1 <sup>st</sup> and 2 <sup>nd</sup> Floor Reception Areas Suite 100 and 200	919-335-1000 919-335-1001
Business and Industry Center	Suite 200	919-335-1001

# Wake Tech – Public Safety Education Campus Information

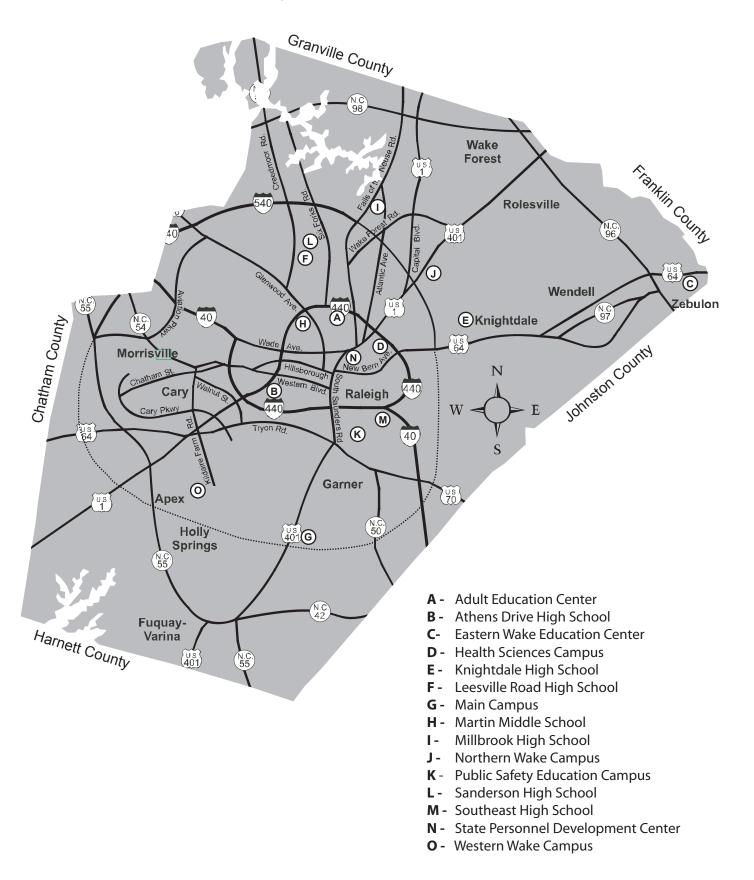
SERVICE	PUBLIC SAFETY EDUCATION CAMPUS	PHONE
Advising/Admissions:	Room 1716 M, W 8 a.m. – 5 p.m. Friday (by appt. only) 8 a.m. – 4 p.m.	919-866-5468
Campus Police	Room 1428 M-F, 8 a.m. – 5 p.m.	919-866-5911
Cashier's Office	Room 1718 M-F, 8 a.m. – 5 p.m.	919-866-6108
Counseling Academic, Career, and Personal	Room 1714 Wednesday, 9 a.m. – 1:30 p.m.	919-866-6137
Disability Support Services:	Room 1714 By appointment	919-866-6137
Financial Aid	Room 1714 Monday, 1 – 3 p.m.	919-866-6137
Individualized Learning Center (Reading, Writing, Math, Computer, and Foreign Language 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	Room 1911 M-F, 8 a.m. – 4:30 p.m.	919-866-6101
SGA (Student Activities)	Room 1714 Thursday, 11 a.m. – 1 p.m.	919-866-6137

#### **Wake Tech Locations**

#### **Wake County, NC**

919-866-5000

http://locations.waketech.edu

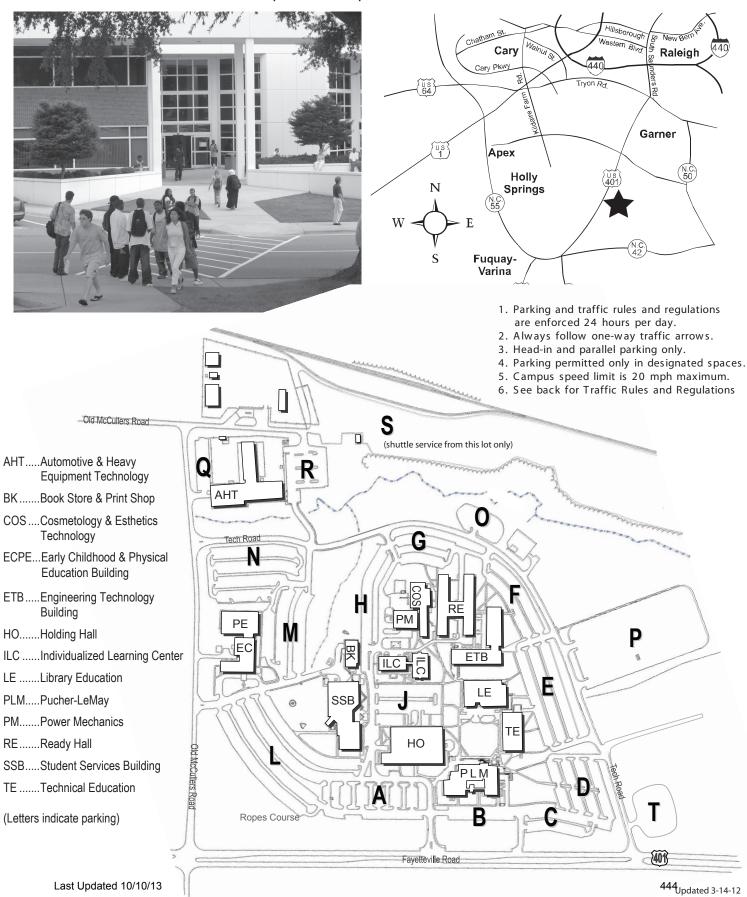


# **Wake Tech Main Campus**

9101 Fayetteville Road, Raleigh, NC

919-866-5000

http://maincampus.waketech.edu



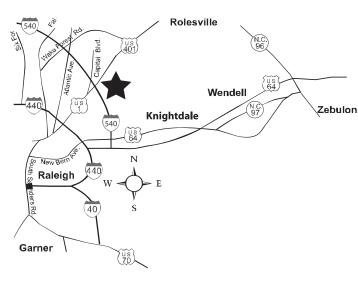
# **Northern Wake Campus**

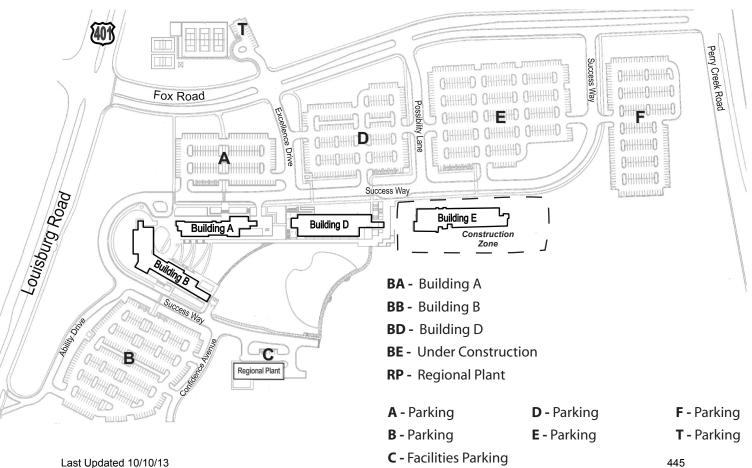
6600 Louisburg Road, Raleigh, NC

919-866-5000

http://northerncampus.waketech.edu



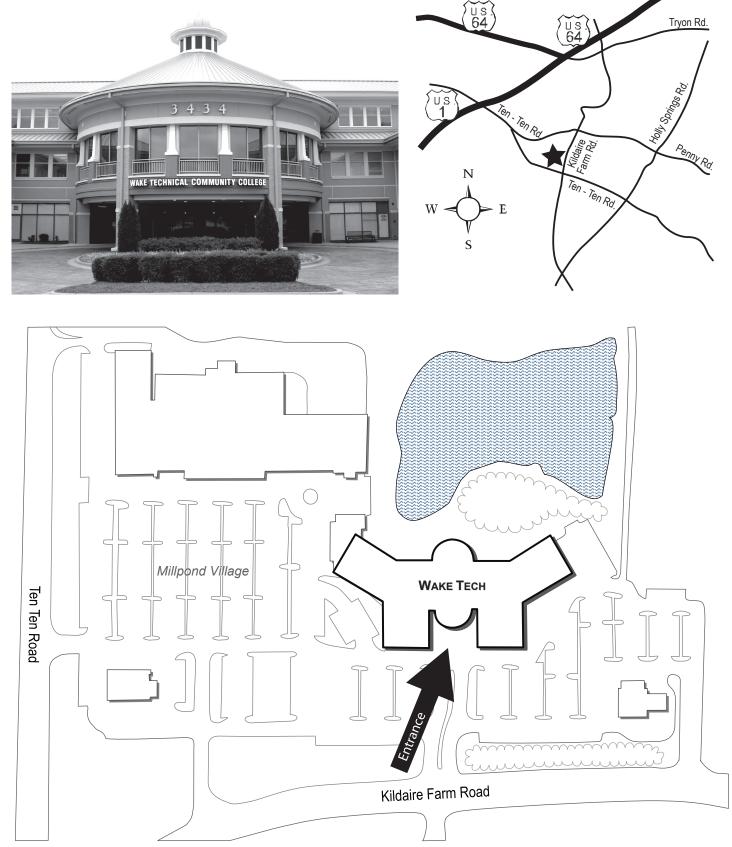




# Western Wake Campus 3434 Kildaire Farm Road (Millpond Village), Cary, NC

919-335-1000

http://westerncampus.waketech.edu

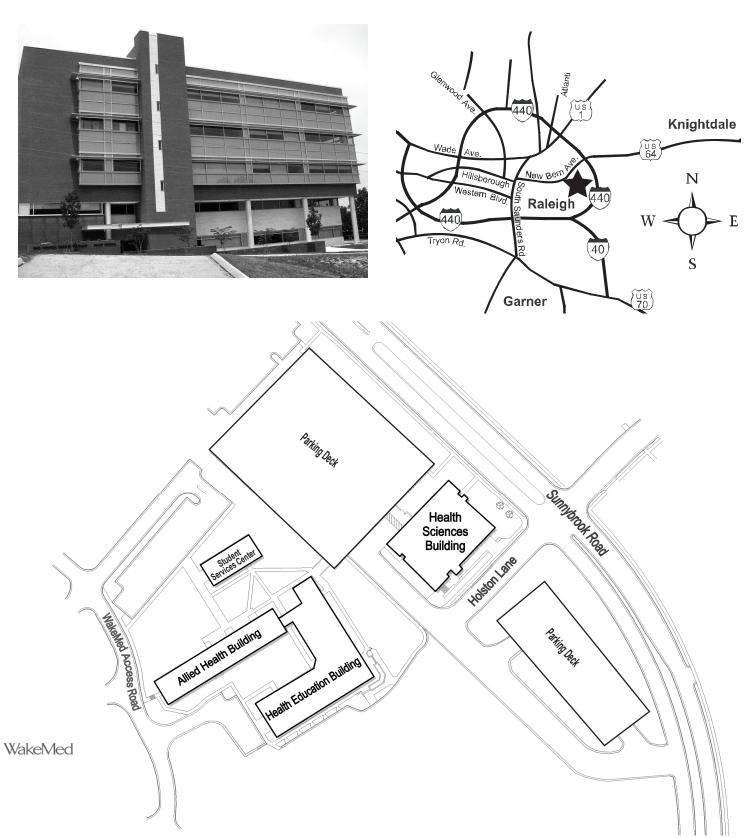


# **Health Sciences Campus**

2901 Holston Lane, Raleigh, NC

919-747-0400

http://healthsciencescampus.waketech.edu



# Public Safety Education Campus 321 Chapanoke Road, Raleigh, NC

919-866-6100

http://facilities.waketech.edu/campuses/pstc.php



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