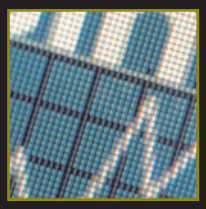
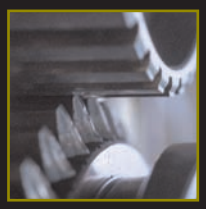
STARK STATE COLLEGE

Changing Lives...Building Futures

CATALOG 2007-2009



Business Technologies



Engineering Technologies

General Studies

Health Technologies

Information Technologies

Public Service Technologies

Stark State College

Changing Lives ... Building Futures

The College reserves the right to make changes in offerings, requirements and regulations subsequent to the publication of this Catalog.

A student accepted into a specific technology, and who is completing the coursework on a part-time or full-time basis after a lapse of years, should seek periodic counseling from the appropriate department chair because program requirements may change.

Open Door Policy

Access to Ohio's state-assisted colleges must be assured for every person who wants and can benefit from higher education. Stark State College of Technology maintains an "Open Door" policy and cordially welcomes anyone who wishes to receive a higher education.

Section 3345.06 of the Ohio Revised Code states, "A graduate of the twelfth grade should be entitled to admission without examination to any college or university which is supported wholly or in part by the state."

Open admission carries with it the full weight of equal opportunity for all, which means the College must make every effort to be sensitive and responsive to the needs of prospective students.

The open admission policy allows a student to enroll in the College, but not necessarily in a specific degree-granting program.

Normal admission to the College is open to anyone who is a high school graduate or the equivalent, completes the enrollment procedures, and pays the fees for admission. This is exclusive of academic record or placement testing results. This open door policy does not deny specific technology departments the right to require preliminary training or talent.

Students who do not meet specific program requirements upon admission to the College, may be required to satisfactorily complete such requirements before admission into a specific technology.

NOTICE TO STUDENTS: Due to the high cost of printing, the College can only provide students with one Catalog free-of-charge. Do not lose or destroy this Catalog. It is to your benefit to make this Catalog your primary reference, retain it and make helpful notes in it.

Stark State College is committed to equal opportunity for all and does not discriminate on the basis of race, color, religion, ancestry, national origin, gender, age, disability or veteran's status.

STARK STATE COLLEGE

6200 Frank Ave. N.W. • North Canton, OH 44720-7299 • 330-494-6170 • 800-79-STARK

For most current class schedule: ***www.starkstate.edu***

STARK STATE COLLEGE OF TECHNOLOGY

ADMINISTRATION

John O'Donnell, Ph.D.
President

Thomas A. Chiappini
VP for Business and Finance

Lawrence M. Cox, Ph.D.
Provost

Para M. Jones
VP for Advancement, Planning and College/Community Relations

John J. Kurtz
VP for Information Technology

Timothy Quinnan, Ph.D.
VP for Student Services and Enrollment Management

BOARD OF TRUSTEES

Christopher J. Maurer
Chair

Michael Thomas, D.D.S.
Vice Chair

Jeffrey A. Halm

Michael J. Hill

Penny Sherrod-Campanizzi

William R. Strohmenger

Fonda P. Williams, II

Mission Statement

Stark State College will be a first choice in higher education and a catalyst for economic growth.

Vision Statement

Stark State College provides high-value, student-centered associate degrees and professional development. The College is dedicated to individual learning, transferable higher education and career success. We advance quality of life through accessibility and business and community partnerships.

Student Outcomes Assessment

Stark State College is committed to a process of assessment and validation of student learning through which programs of study are continually updated and improved. The College subscribes to development of the following competencies within all degree programs:

- written and oral communications
- computational skills, encompassing mathematical operations and data analysis
- computer applications
- critical thinking skills
- professionalism

Table of Contents

The College Profile

STARK STATE COLLEGE OF TECHNOLOGY

Changing Lives … Building Futures

Stark State College is one of the nation's fastest-growing two-year public colleges. The College offers associate degree programs, one-year certificates, competency credentialing, continuing education, contract training and other opportunities for lifelong learning. Founded in 1960, Stark State provides an excellent education that prepares students for rewarding careers in business technologies, engineering technologies, general studies, health technologies, information technologies and public service technologies.

Stark State College is committed to providing the best education possible to meet the needs of a technologically sophisticated global economy. With experienced faculty, modern facilities and a belief in developing the skills of the individual, Stark State is positioned to provide a high-quality, technology-based education at affordable cost.

The College offers developmental education courses and tutorial services to strengthen basic skills and assist students in their learning.

Financial aid is available to students who qualify. The College's knowledgeable financial aid specialists help students explore the many grants, loans and scholarships that can help them finance their education.

Stark State College provides the competitive edge in today's knowledge-based economy by enabling students to attain their educational goals with a full schedule of credit and continuing education classes. In addition, Stark State's Division of Corporate and Community Services provides customized contract training programs to area employers.

Stark State College has earned a reputation for excellence among local businesses and industries. This reputation for excellence has helped Stark State become the largest college in Stark County – with approximately 8,000 credit and over 3,000 non-credit students.

The College has played a vital role in the economic growth and development of the greater Stark County area through its strong tradition of providing educational and training services to employers and residents.

Stark State College of Technology is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools.

In addition, many individual technologies are accredited and licensed by their professional accrediting associations and organizations.

Stark State's beautiful campus is conveniently located off I-77 to serve students commuting from Stark, Summit, Tuscarawas, Portage, Carroll, Holmes, Wayne, Medina and Columbiana counties. Stark State College provides access to education for students of all ages and backgrounds.

ADVISORY COMMITTEES

Each degree program at Stark State College is developed and kept current with advice from advisory committees, comprised of business and industry leaders in particular fields. With regular input from our advisory committees, Stark State College assures that the education received by our students is current, relevant and independently validated.

Accreditations

STARK STATE COLLEGE OF TECHNOLOGY IS ACCREDITED BY: The Higher Learning Commission of the North Central Association of Colleges and Schools, 30 North LaSalle Street, Suite 2400, Chicago, IL 60602-2504; 312-263-0456 or 800-621-7440; ***www.ncahigherlearningcommission.org***

BUSINESS TECHNOLOGY ACCREDITATIONS

AUTOMOTIVE TECHNOLOGY *Accredited by the National Automotive Technicians Education Foundation (NATEF):* National Automotive Technicians Education Foundation, 13505 Dulles Technology Drive, Suite 2, Herndon, VA 20171-3421; 703-713-0100; ***www.natef.org***

ACCOUNTING AND FINANCE TECHNOLOGY, ADMINISTRATIVE INFORMATION TECHNOLOGY, MANAGEMENT AND MARKETING *Accredited by the Association of Collegiate Business Schools and Programs*, 7007 College Boulevard, Suite 420, Overland Park, KS 66211; 913-339-6226; info@acbsp.org; ***www.acbsp.org***

INFORMATION REPORTING TECHNOLOGY *Accredited by Council on approved Student Education National Court Reporters Association (NCRA):* NCRA, 8224 Old Courthouse Road, Vienna, VA 22182-3808; 703-556-6272; ***www.ncraonline.org***

HEALTH TECHNOLOGY ACCREDITATIONS

DENTAL HYGIENE PROGRAM *The dental hygiene program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body of the American Dental Association recognized by the United States Department of Education:* Commission on Dental Accreditation, American Dental Association, 211 E. Chicago Avenue, Chicago, IL 60611; 312-440-4653; ***www.oda.org***

FIRE/EMERGENCY MEDICAL *All accreditation in these two areas are through:* Department of Public Safety/Division of EMS, 1970 West Broad Street, P.O. Box 182073, Columbus, OH 43218-2073; 800-233-0785; ***www.ems.ohio.gov***

HEALTH INFORMATION MANAGEMENT TECHNOLOGY
The health information management technology program is accredited by the Commission on the Accreditation of Health Infomatics and Information Management Education (CAHIIM) in cooperation with the American Health Information Management Association's Council on Accreditation: CAHIIM 233 N. Michigan Avenue, 21st Floor, Chicago, IL 60601-5800; 312-233-1131

MASSAGE THERAPY CERTIFICATE PROGRAM - ASSOCIATE OF TECHNICAL STUDIES IN MASSAGE THERAPY *Approved by the State Medical Board of Ohio:* State Medical Board of Ohio, 77 S. High Street, 17th Floor, Columbus, OH 43266; 614-466-3934

Information about the accreditation process for listed technologies may be requested from the respective division offices, or by contacting the accrediting agency directly.

MEDICAL ASSISTING *The Commission on Accreditation of Allied Health Education Programs (CAAHEP) grants accreditation to programs in Medical Assisting upon recommendation of the Curriculum Review Board of the American Association of Medical Assistants' Endowment (CRB-AAMAE):* CAAHEP, 35 E. Wacker Drive, Suite 1970, Chicago, IL 60601-2208; 800-228-2262

OPHTHALMOLOGY ASSISTANT *Accredited by* the Committee on Accreditation for Ophthalmic Medical Personnel (CoA-OMP), a sponsor committee of the CAAHEP system, 2025 Woodlane Drive, St. Paul, MN 55125-1992; 800-284-3937

MEDICAL LABORATORY TECHNOLOGY *Accredited by NAACLS (National Accrediting Agency for Clinical Laboratory Sciences):* National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415; 773-714-8880

NURSING *Full approval from the Ohio Board of Nursing and is accredited by the National League for Nursing Accrediting Commission (NLNAC):* National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York, NY 10006; 800-669-1656

OCCUPATIONAL THERAPY ASSISTANT TECHNOLOGY *Accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA):* AOTA, 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220; 301- 652-AOTA.

PHYSICAL THERAPIST ASSISTANT TECHNOLOGY *Accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association:* Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, VA 22314; 703-684-2782

RESPIRATORY CARE TECHNOLOGY *The respiratory care technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Committee on Accreditation for Respiratory Care (CoARC):* 1248 Harwood Road, Bedford, TX 76021-4244; 817-283-2835; ***www.coarc.com***

ENGINEERING TECHNOLOGY ACCREDITATIONS

CIVIL ENGINEERING TECHNOLOGY, DESIGN ENGINEERING TECHNOLOGY, ELECTRICAL ENGINEERING TECHNOLOGY, ELECTRONIC ENGINEERING TECHNOLOGY and MECHANICAL ENGINEERING TECHNOLOGY
Accredited by the Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET): 111 Market Place, Suite 1050, Baltimore, MD 21202-4012; 410-347-7700; ***www.abet.org***

PUBLIC SERVICE TECHNOLOGIES ACCREDITATIONS

EARLY CHILDHOOD EDUCATION *Accredited by the Ohio Department of Education:* Certification and Licensure, Ohio Department of Education, 25 South Front Street, Columbus, OH 43215; 614-466-3593; ***www.ode.state.oh.us***

Admission to the College

All individuals interested in pursuing an education at Stark State College of Technology are welcome to apply. A candidate working toward an associate degree should be a high school graduate or the equivalent (successful completion of the General Educational Development [GED] equivalency) to assure successful completion of the program. An application for admission may be obtained online or requested from the Office of Admissions/Student Services.

ADMISSION PROCEDURES

Admission to Stark State College is open to all applicants. International students should also refer to the section entitled International Student Admissions. The following procedures should be followed:

1. Submit an application form, which may be obtained at the College, from high school guidance counselors, or online at ***www.starkstate.edu***.
2. Provide the Academic Records/Registrar's Office with an official final transcript of your high school records and GED scores, if applicable. This may be done through the high school guidance office.
3. Provide the College with the results of the ACT or SAT testing program by requesting that they be sent directly to the College by the testing service. This requirement is waived for students in the continuing education (non-credit) program.
4. The College's assessment program assists students in the registration process and helps assure the best placement for academic success. All students must complete the assessment process for advising purposes. Assessment may include transcript evaluation and/or completion of the computerized COMPASS Placement Assessment in English, reading and math.
5. A personal interview may be requested in cases where other screening procedures do not provide sufficient information.
6. Students who have attended another college or university must request copies of transcripts be sent directly to the College.
7. Students seeking admission to a health technology program must complete a separate health application.

TRANSFER APPLICANTS

Coursework from other regionally accredited institutions of higher education designated in the Transfer *Credit Practices of Designated Educational Institutions of the American Association of Collegiate Registrars and Admission Officers*, will be evaluated upon receipt of an official transcript and at the written request of the student.

TRANSIENT STUDENT

A transient student is a student who plans to enroll at Stark State College on a temporary basis. Follow the steps listed below to complete the admissions process:

1. Complete a Stark State College application. The application is available online or by contacting the Office of Admissions/Student Services at 330-966-5450.
2. Receive academic advising and approval from home institution for course(s) planned for enrollment at Stark State College.
3. Submit written approval from home institution to Stark State College Academic Records/Registrar's Office indicating the course(s) for enrollment. Bring approval form at time of registration.
4. Meet with a Stark State College admissions counselor to review enrollment process.

Contact the Office of Admissions/Student Services at 330-966-5450 with questions.

INTERNATIONAL STUDENT ADMISSIONS

Stark State College of Technology welcomes qualified students from other countries and seeks to make their educational experience pleasant and meaningful.

All admissions requirements must be completed two months prior to start date.

1. In addition to those records mentioned under "Admissions Procedures" for all students, the following is required of the international student:

- Proof of English language proficiency. A score of 500 or greater on the written Test of English as a Foreign Language (TOEFL) or 173 on the Computer-Based Test is considered as adequate proof of language proficiency. This test is administered throughout the world in major cities. Registration materials for the test may be obtained by applying to TOEFL, Box 899, Princeton, New Jersey 08541.
- Proof of adequate finances to meet the costs of fees, books, health insurance, room and board off-campus, transportation and personal expenses while attending Stark State College.
- Proof of satisfactory completion of a program of education, which is equivalent to high school in the United States. Any degree, diploma or certificate should be supported by a certified copy of the document and a translated copy where the original is not English.
- A copy of your VISA/PASSPORT and admission number on your I-94 if currently in the United States.

2. Upon receipt of the aforementioned documents, the applicant for admission as an international student will receive a conditional acceptance letter. The acceptance is conditioned upon the applicant transferring adequate finances to Stark State College, which will be held in trust for the student. The student may withdraw trust account funds to meet reasonable expenses while attending Stark State College. The remainder of the trust account will be returned to the student upon graduation, transfer to another college or termination of attendance and departure from the United States.
3. Upon the receipt of funds from the applicant, the College will forward a letter of acceptance and the forms necessary to obtain a student visa.
4. To maintain a satisfactory student status at Stark State College, the international student must:

- be taking a full course of studies;
- make satisfactory progress toward the degree goal; and
- maintain a final balance to cover tuition and fees in the student's trust account at the College.

STUDENT ACCESS WEB SITE

Students can now register for classes, monitor their financial aid and make tuition payment via the Web using this interactive and secure Web site.

The Student Access Web site is a one-stop resource where students can:

- search for course offerings and view course descriptions and prerequisites,
- register for classes and drop/add classes,
- pay tuition and fees on-line using a credit card,
- view their financial aid awards,
- view their class schedule and tuition information,
- use Degree Audit to monitor progress toward a degree, and perform "what ifs" on changing their academic major,
- view grades
- access National Clearinghouse
- review the Course Applicability System (CAS) at ***www.transfer.org***
- and purchase books.

To access the Student Access Web site go to ***www.starkstate.edu/student*** or click on the Student Web Access link on the College's Internet site at ***www.starkstate.edu***. The Student Access Web site is accessible daily between 7 a.m. and midnight.

Additional links, including student email, are also available.

Note: NEW students must enroll in-person for classes.

ACADEMIC ADVISING

The academic advising process at Stark State College of Technology is a significant aspect of student development. More than helping schedule courses, this process helps students fulfill their potential. To achieve this objective, faculty and counseling personnel are available to advise students, in person or online. Every faculty member is an advisor to students enrolled in his/her course. The faculty member is the best source of information pertaining to a course. Students enrolling for 18 or more credit hours must have an academic advisor's signature.

Depending on student need, the academic advising process may involve:

- analysis of the student's long-range aspirations, goals and abilities.
- analysis of educational and career objectives.
- selection of academic major.
- planning course sequence in academic major.
- class scheduling.
- continuous assessment and possible referral.

PLACEMENT TESTING

Every first-time Stark State College of Technology degree-seeking student is required to take the COMPASS exam unless he/she has ACT scores. Students make elect to take COMPASS if they have ACT scores. Students may retake the COMPASS exam one time. Students with applicable transfer credits are not required to test in that area.

REQUIRED COURSE PLACEMENT

First-time SSCT degree-seeking students are required to complete all developmental courses into which they are placed by COMPASS or ACT scores and that are required by their programs, beginning with their first semester of credit enrollment and continuing for all subsequent semesters to completion. Reading proficiency is required of all students as determined by placement or course completion. Exceptions may be made on a case-by-case basis for a student returning after an absence at the discretion of the subject department chair or designee.

TRANSCRIPTING CREDIT FOR PRIOR LEARNING

Credit can be awarded for demonstrated college-level learning. Students applying for credit:

1. must provide documentation to support the learning,
2. must have documentation evaluated by the appropriate college personnel, and
3. will have this credit recorded on the student's transcript after the student successfully completes 12 hours at Stark State College of Technology, if credit is awarded. Successful completion is defined as a "C" or better. Students wishing more information should contact the Office of Admissions/Student Services.

CREDIT BY EXAMINATION (PROFICIENCY TESTING)

Students who can demonstrate ability and knowledge in a particular subject area may establish credit in certain courses without enrolling in them. This is done by taking a special examination or performing a special assignment, or both, through the appropriate department. An examination fee is assessed. No letter grade is given. A maximum of 12 credit hours may be taken by examination without prior approval of the Board of Trustees. Students may take the exam only once per course. Students enrolled in a course are not eligible to take a proficiency examination for the course after being enrolled for 20 calendar days or more for a regular term, and seven days or more for an eight-week term.

ADVANCED PLACEMENT

The College accepts credits earned while in high school as measured by the College Entrance Examination Board's Advanced Placement (AP) program. Students must score three or higher on a subject-area examination. Contact the Office of Admissions/Student Services at 330-966-5450 for additional information.

CLEP CREDIT BY EXAMINATIONS

The College will award comparable academic credit to registered students for successful completion of the College Entrance Examination Board's College Level Examination Program (CLEP) general and subject-area examinations. Contact the Office of Admissions/Student Services at 330-966-5450 for additional information.

EARLY COLLEGE ADMISSION POLICY/ POST-SECONDARY ENROLLMENT OPTIONS(PSEO)

Stark State College's early college admission program is designed to provide qualified high school students with access to college-level coursework. College courses taken under the early college admission program may also fulfill high school graduation requirements, if approved by the student's local school district.

Participation in the early college admission program at Stark State College is not intended to replace high school course-work, but rather to enhance educational opportunities available to high school students.

For additional information, contact the Office of Admissions/ Student Services at 330-966-5450.

STARK COUNTY COLLEGE TECH PREP

College Tech Prep is an exciting approach used in high schools and colleges to prepare high school students for the growing number of technical jobs that will require highly-skilled technical workers in the future. These important, good-paying jobs will require more than a high school education. This means that many more young Americans will need to prepare to go to college – particularly into the technical programs that lead to an associate degree and beyond.

College Tech Prep expands options and opportunities with:

- a direct path to a college degree
- college credits earned while in high school
- scholarship opportunities
- team teaching and project-based instruction

At the end of high school, College Tech Prep graduates are ready to choose a technical major and enter an advanced skills technical college degree program with stronger basic and occupational skills than graduates of general education or college prep programs. There are also articulation agreements in place with many colleges and universities where students may earn college credits while in high school and/or may transfer credits earned for an associate degree toward a bachelor's degree.

The Stark County College Tech Prep Consortium partners all public school districts in Stark County with numerous colleges and universities.The Consortium, which originated in 1992, is a dynamic initiative that continues to evolve and grow in terms of district partnerships and programming.

The Consortium has implemented programs in the following career fields:

- Agricultural and Environmental Systems
- Business and Administrative Services
- Construction Technologies
- Health Technologies
- Education and Training
- Engineering and Science Technologies
- Finance
- Information Technologies
- Law and Public Safety
- Marketing Technologies
- Manufacturing Technologies
- Transportation Technologies

Students from all Consortium high schools are eligible to apply for admission to these high school programs on a tuition-free basis. Successful completion of the high school portion of this program presents the possibility of advanced standing for entry into specific college programs.

The Consortium is the proud recipient of the prestigious Ohio's BEST Practices award, sponsored by the Ohio Business Roundtable, and the National Tech Prep Network Exemplary Worksite Learning Award as first place in the nation. For more information on these awards, or for program information, visit ***www.starkcountytechprep.org***.

FULL-TIME STUDENT

A full-time student is considered to be any student who is officially enrolled at Stark State College of Technology and taking a minimum of 12 semester hours of coursework.

PART-TIME STUDENT

A student enrolled in 11 semester hours of coursework or less is considered a part-time student.

STUDENT I.D. CARDS

Identification cards will be mailed to all students enrolled at the College. This card also serves as the student's library card. Students are expected to carry I.D. cards at all times. Loss or theft of an I.D. card should be reported to the Academic Records/Registrar's Office.

VETERANS EDUCATIONAL BENEFITS

Stark State College is fully accredited under the laws that provide educational benefits for veterans. The Academic Records/Registrar's Office certifies veterans' eligibility.

STARK CAMPUS LIBRARY

Stark State College of Technology and Kent State University Stark Campus share a campus library (the Learning Resource Center – LRC) to serve the needs of students at both institutions. In addition to in-house book, periodical, reference, video and CD holdings, the library offers students online access to the Internet, Kent State University's main library and all branch libraries, as well as access to many university libraries through OhioLINK. During academic semesters, the library is open Monday through Thursday from 8 a.m. to 10 p.m., Friday from 8 a.m. to 5 p.m., Saturday from 9 a.m. to 3 p.m., and Sunday from 1 p.m. to 5 p.m. During academic breaks, the library is open Monday through Friday from 8 a.m. to 5 p.m. Call 330-499-9600 for library information.

STARK STATE BOOKSTORE

Textbooks, supplies and retail items are available in the bookstore. The bookstore is open during all hours of registration. Regular bookstore hours are: Monday through Thursday, 8:30 a.m. to 8 p.m. and Friday, 8:30 a.m. to 4 p.m., or as posted. The bookstore may be accessed online at ***www.starkstate.edu/campusinfo/bookstore.htm***.

STUDENT RESPONSIBILITY

Each student is responsible for complying with the regulations in this Catalog and with other published regulations of the College. Class schedule information is a supplement to the *College Catalog* and is also an official statement of policy, as is policy published on the Stark State Web site and in the *Student Handbook*.

The most current *Policies and Procedures* are available at ***www.starkstate.edu/policies***.

Student Services

Services of a non-instructional nature are provided by the Office of Admissions/Student Services. Stark State College faculty and staff support the philosophy, objectives and goals of the College. In its concern for students and their progress toward educational and occupational goals, the College has organized a program of services and activities to assist our students in making full use of the total educational program.

ACADEMIC ADVISING

The academic advising process at Stark State College of Technology is a significant aspect of student development. More than helping schedule courses, this process helps students fulfill their potential. To achieve this objective, faculty and counseling personnel are available to advise students, in person or online. Every faculty member is an advisor to students enrolled in his/her course. The faculty member is the best source of information pertaining to a course. Students enrolling for 18 or more credit hours must have an academic advisor's signature.

Depending on student need, the academic advising process may involve:

- analysis of the student's long-range aspirations, goals and abilities.
- analysis of educational and career objectives.
- selection of academic major.
- planning course sequence in academic major.
- class scheduling.
- continuous assessment and possible referral.

COUNSELING SERVICES

Students are encouraged to make full use of counseling services. The counseling staff assists students with educational goals and with personal concerns that might affect academic progress in college. Contact the Office of Admissions/ Student Services at 330-966-5450 for more information.

OFFICE OF MULTICULTURAL STUDENT AFFAIRS

Stark State College provides services to multicultural students to maximize access for educational opportunities and to create a campus environment that is representative of the racial and ethnic diversity in society at large. The goal of this commitment is to assist multicultural students in reaching personal, academic and career goals at Stark State and beyond. The Office of Multicultural Affairs is available to provide:

- academic, personal and group counseling.
- referrals for scholarships, financial assistance, career counseling, tutoring, mentoring and internship programs.
- coordination of various services with academic and non-academic Stark State offices.

Other support activities include:

- coordinating communications between the student services office and the multicultural student community.
- liaison between Stark State and various community agencies.
- promotion of cultural diversity programs.

To schedule an appointment, call the Office of Multicultural Student Affairs at 330-966-5450, Ext. 4274.

DISABILITY SERVICES

Stark State College provides assistance to students with disabilities in order to maximize educational opportunities and individual potential. The disability support services coordinator assists students with disabilities by providing academic support services; admissions procedures; financial aid information; and academic, personal and career counseling. The campus includes many accessible features, such as adapted restrooms, electric doors, handicapped parking (by permit) and Braille tactual room signs. The College's disability support services coordinator coordinates various services with academic and non-academic offices and serves as a liaison between the College community and state/local agencies. Students must inform the disability support services coordinator of their need for accommodations prior to the start of their coursework. Students must provide documentation of their disability, test reports and school records to help the disability support services coordinator provide appropriate academic accommodations and support services. A pre-admission interview prior to applying to the College is suggested. Call the Office of Admissions/Student Services at 330-966-5451 for information or to schedule an interview.

NEW STUDENT ORIENTATION

The College provides an orientation program to help new students understand and adjust to college policies, services, faculty and programs. Registered students are notified of the date and time of orientation.

E-LEARNING ORIENTATION (WEB-BASED COURSES)

Students enrolling in Web-based courses for the first time are urged to attend one of the E-Learning Orientation sessions published each semester in the College class schedule and on the College Web site. These sessions include information about course expectations, logging on, College services available to Web students, troubleshooting and preventing technical computer problems, and accessing the course. The sessions also provide students with information about how to access and complete a "hands-on" orientation course.

STUDENT EMAIL

All Stark State College students who are registered for at least one credit course in an academic year (fall semester through summer sessions) will be provided a College email account for that academic year. Students can use their email accounts to send or receive email from any computer that has access to the Internet including a home computer or a computer in the College's open lab. All students will be assigned a permanent account name and password. To access student email, type in ***http://email.starkstate.net*** in the browser's address box or follow the links from the College's main Internet site at ***www.starkstate.edu***. All student email directories and accounts will be regenerated prior to the fall term each year. There are restrictions on the availability, capacity, duration and use of student email accounts and students are expected to abide by the College's computer use policy. For additional information go to ***http://email.starkstate.net***.

COMPUTER LAB USAGE GUIDELINES

The use of computing facilities at Stark State College is a privilege. Users are subject to compliance with certain principles designed to assure that all users have reasonable access to facilities. Students and others authorized to use the computer labs must read and agree to the terms of the guidelines prior to using any College computer equipment. The *Computer Lab Usage Guidelines* have been instituted to ensure that the action of any one user will not adversely affect any aspect of the work or computer usage of another.

Abuse of computing privileges is subject to disciplinary action. Disciplinary action may include loss of computing privileges and other disciplinary sanctions up to and including discharge and/or dismissal. An abuser of the College's computing resources may also be liable for civil or criminal prosecution.

Computer Lab Usage Guidelines are available from the Office of Admissions/Student Services, from the staff of any of the computer labs and in the *Student Handbook*.

STUDENT HEALTH INSURANCE

Students may subscribe to the student health group insurance plan. This is a voluntary program to provide hospitalization insurance to those students no longer covered by their parents' policy. Information is available at the Cashier's Office and the Office of Admissions/Student Services.

STUDENT PRIVACY REGULATIONS

The College has implemented the statutory requirements pertaining to the access, inspection, and review of student records, in accordance with the *Family Education Review and Privacy Act of 1974*.

STUDENT RECORDS

Student records include all official records, files and data directly related to a student who has attended classes at Stark State College. This includes all material that is incorporated into the student's cumulative record folder, which is intended for College use or to be available to parties outside the College, and specifically including, but not necessarily limited to, identifying data, academic work completed, level of achievement (grades, standardized achievement test scores), attendance data, scores on standardized intelligence, aptitude and psychological tests, interest inventory results, health data, family background information, teacher or counselor ratings and observations, and verified reports of serious or recurrent behavior patterns.

STUDENT DIRECTORY INFORMATION

A student's directory information includes the following information and may be released without the student's consent: name; home address; college email address; phone number; major; status, including dates of attendance; full-time/part-time; withdrawals, hours enrolled; degrees awarded and honors received (Phi Theta Kappa, Dean's List, distinction, high distinction, etc.)

Please note that students have the right to withhold the release of directory information. To do so, a student must complete a Request for Non-Disclosure of Directory Information form available on the College Web site or in the Academic Records/Registrar's Office. There are two important details regarding placing a "no release" designation on records that a student needs to be aware of:

1. The College receives many inquiries for directory information from a variety of sources outside the institution including prospective employers, news media, honor societies, and insurance companies. Placing a "no release" designation on your record will preclude release of such information.
2. A "no release" designation can apply to all elements or individual elements the student chooses to withhold.

Parents do not have an automatic right to information on the student attending Stark State College, even if the student is legally a minor under the age of 18. Parents do have the right to this information if the student is financially dependent on the parent and the parent can show proof of this by his or her most recent federal income tax return.

STUDENT CONDUCT

When a student enters Stark State College of Technology, it is taken for granted by College authorities that an earnest purpose exists, and that the student's conduct will demonstrate that assumption. If, however, the student should be guilty of unbecoming conduct, academic dishonesty, or should neglect academic duties, the College administration will take such action as the particular offense requires. College disciplinary action may include: (a) informal reprimand, (b) formal reprimand, (c) administrative probation, (d) a definite period of suspension, (e) an indefinite period of suspension, and (f) expulsion.

Teaching and Learning Division

The Teaching and Learning Division provides a variety of instructional and counseling support programs to assist students, faculty and staff in achieving their academic, career and personal goals here at Stark State College.

BRIDGE (Building Relationships, Integrating Divisions, Generating Excellence)

BRIDGE is a faculty team that conducts the College in-class portion of the assessment program and creates on-going opportunities for faculty development. During Spring semester, certain faculty members participate with their students in activities to assess students' general skill levels and to assist teachers in improving in general skills instruction across all divisions of the College. These activities are held in a sampling of various departmental classes; therefore, students may participate in one or more of these sessions during their time at Stark State.

Tutoring and Academic Success Center (TASC)

Successful completion of any college curriculum requires mastery of fundamental mathematics and language skills, as well as basic study skills; yet many college students lack proficiency in one or more of these areas. The Tutoring and Academic Success Center helps students meet their academic goals by providing a collection of educational services in a comfortable setting. Tutoring is available each semester. An updated schedule is on the College Web site under the Academic section, as well as outside the Tutoring. Faculty and student tutors are available at scheduled times by subject. There are no sign-ups or charges for this service. Additional services include computer-based instruction and tutorials, video instruction, word processing, and Internet access. Instructional technicians are available to assist students, and service is designed to provide direct support for selected courses for both students and faculty. There is no charge or need for an appointment to use the Center.

The Testing Center

The Testing Center offers both computer-based and pencil-and-paper testing to specific courses. Some courses provide students with computer-based testing. This allows students in those courses to take tests outside of class in the Testing Center within a timeframe of usually three to four days. This service allows for more instructional time in class and also provides the students with an opportunity to become familiar with this technology. This is an additional advantage for students, as many licensure exams are now computer-based.

Returning to Learning Workshops

To address the concerns of students entering the college, the Teaching and Learning Division offers transitional support through the "Returning to Learning Workshop." Participants attend three sessions, which assist with the admissions and enrollment process, stress and time management within the framework of being a college student, and study skills.

Educational Counseling

Students may receive free short-term educational counseling services through the Teaching and Learning Division. Facilitators provide counseling and support groups for issues which affect academic success. Crisis intervention and referral are also available.

Student Success Seminars

Each term, information regarding college success is presented to students either in the classroom or through free seminars. Stop by The Teaching and Learning Office or visit ***www.starkstate.edu/teachingandlearning*** to obtain a copy of the current semester calendar of seminars.

TRIO – Student Support Services

The TRIO-SSS project is a federally funded program offering a wide variety of support and academic services to qualifying students. Participants are low-income, first generation College students who require academic support. Some of theses students may also have disabilities. The services provided are education and career planning, advising, tutoring, and educational counseling.

Since the Teaching and Learning Division is a part of the instructional arm of the college, innovations in programming, such as workshops to assist in preparing for college entry, are provided as a means of consistently enriching the support offerings at Stark State College.

Career Planning Services

Career Services at Stark State College is dedicated to empowering students and alumni in developing career planning and job search skills, and facilitating mutually beneficial relationships between employers, students and alumni.

All students are encouraged to become familiar with the Career Services Office during their first semester.

CAREER CENTER INFORMATION

The Career Center can provide

- information on many employers for pre-interview research.
- information on various careers in the form of publications and videos.
- current information on the job search. Material includes resumes, cover letters, interviewing and other related topics.
- want ads from local newspapers
- Career Services Web page with career planning and employment links.

EMPLOYMENT SERVICES

Professional Work Experience

The Career Services Office works with students to help them connect with employers for professional work experience opportunities. Students should have a minimum GPA of 2.0, sophomore standing and have relevant coursework completed in their major. This program is designed to help students obtain experience in their field while they are attending college. The Professional Work Experience program is available to students in Business, Engineering Technologies and Information Technologies.

On-Line Job Board (College Central Network)

Approved students and alumni are eligible to use the Stark State College online job board after completing a registration process. Once registered, students/graduates will be able to search jobs and e-mail a resume to employers. Employers will also be able to search resumes and contact candidates directly for job opportunities. All students are encouraged to meet with a career services representative to learn more about the College Central Network.

Student Jobs

For current students, a job bulletin board is available which displays part-time and full-time student jobs. Work Study jobs on campus are processed via the Financial Aid Office.

Job Search Assistance

The Career Services Office provides assistance on all aspects of the job search, including help with resumes, cover letter and interviewing.

Student Life

The College's goal is to provide the finest intellectual experience in an environment that highlights the fullest individual and social development of each student. All students have the opportunity to participate in student activities such as: student government, student clubs and other worthwhile and interesting events.

PHI THETA KAPPA HONOR SOCIETY

Phi Theta Kappa is an international honor society for two-year colleges which is similar in structure and operation to Phi Beta Kappa at four-year institutions of higher learning. Phi Theta Kappa provides its members with opportunities in the areas of scholarship, leadership, service and fellowship. The society has over two million members and more than 1,200 chapters worldwide. The Beta Gamma Epsilon chapter of Phi Theta Kappa was established at Stark State College in 1996. To qualify for membership, a student must have a cumulative GPA of 3.75 or higher in at least 16 hours of degree-related courses. To continue membership, a student must maintain a cumulative GPA of 3.40. The initial membership fee provides lifetime membership at the local, regional and international levels. Phi Theta Kappa members are encouraged to participate in honors and service projects at all levels of the society.

INTERFAITH CAMPUS MINISTRY

Interfaith campus ministry was formed in 1967 and serves all persons on the campus – students, faculty and staff – through personal counseling (faith issues, crisis, family, stress, loneliness, communication) support groups and study groups. Interfaith is a link between the campus, religious communities and area resources. Interfaith promotes respect for the dignity of each person and understanding and acceptance of persons of diverse faith, traditions and cultures. Interfaith responds to personal concerns in a confidential atmosphere. Interfaith sponsors the Stark Campus Preschool Child Center, located adjacent to the campus.

CAMPUS PRESCHOOL CENTER

The Stark Campus Preschool Child Center is operated by interfaith campus ministry for students, faculty and staff of Stark State College and the community. Center hours are Monday through Friday, 7 a.m. to 6 p.m. Children may be enrolled by the semester. The center is located at the John Knox Presbyterian Church, 5155 Eastlake N.W., across from the campus. For child care registration and information, call 330-499-0909.

STUDENT ORGANIZATIONS/CLUBS

An elected student government plans and coordinates extracurricular programs and social affairs for students. The student government assists the College faculty and administration in making rules and regulations by providing student opinion and advice.

Student clubs include:

- American Society of Mechanical Engineers (ASME)
- American Society of Civil Engineers (ASCE)
- Animation Club
- Association for Medical Laboratory Technicians (AMLT)
- Association of Information Technology Professionals (AITP)
- Business Leaders at Stark State College
- Diversity Club
- Environmental Club
- Institute of Electrical and Electronic Engineers (IEEE)
- Institute of Management Accountants (IMA)
- InterClub Council (ICC)
- International Association of Administrative Professionals Student Chapter
- International Club
- Phi Theta Kappa International Honor Society
- Respiratory Care Club
- Ski and Snowboarding Club
- Society of Manufacturing Engineers (SME)
- Society of Women Engineers (SWE)
- Stark State College Association of Medical Assistants
- Student Ambassador Program
- Student Association of Dental Hygiene Association (SADHA)
- Student Health Information Management Association (SHIMA)
- Students in Human and Social Services Technology Association
- Student Informer
- Student Nurse Association – Stark State College (SNA)
- Student Occupational Therapy Assistants Club (SOTA)
- Student Physical Therapy Assistant Club (SPTA)
- Veteran's Club – Charles D. Ellis Veteran's Club at Stark State College

Financial Aid

The Financial Aid Office is staffed with experienced professionals who can assist students in analyzing their particular situations and determining the appropriate avenue for financial assistance. The goal of the financial aid staff is to provide financial assistance to students who otherwise could not afford to attend college. Additional information about financial aid is available at ***www.starkstate.edu/finaid*** or in the Financial Aid Office.

APPLICATION FOR FINANCIAL AID

The first step in applying for financial aid is to complete the College's admissions process. This includes submitting an official copy of your final high school transcript or a copy of your GED scores to the Academic Records/Registrar's Office. Financial aid cannot be disbursed until the final high school transcript or GED is on file at Stark State College.

STEPS TO OBTAIN FINANCIAL AID

- Obtain and review a Financial Aid Packet from the Stark State College Financial Aid Office.
- Complete the Stark State Institutional Form (IF) in the packet
- Apply for Department of Education personal identification number (PIN) at ***www.pin.ed.gov***.
- Complete the Free Application for Federal Student Aid (FAFSA) or Renewal FAFSA. Both are available on the Web at ***www.fafsa.ed.gov*** by using Stark State's federal school code 011141.

Full explanation of this process is available at ***www.starkstate.edu/finaid*** or by visiting the Financial Aid Office.

REQUIRED FORMS AND PRIORITY DATES

SSCT Institutional Form

- May 1 of the award year
- March 1 of the award year if attending for summer session or promptly upon request

SSCT Scholarship Applications

- June 1 of the award year

FAFSA

- May 1 of the award year
- March 1 of the award year if attending for summer session or promptly upon request

Verification worksheet

- Promptly upon request

Other required documentation

- June 1 of the award year
- May 1 of the award year, if attending summer session or promptly upon request

Online loan request

- July 1 of the award year
- May 1 of the award year, if attending Summer session

Late Applicants: The Financial Aid Office will process late applications as quickly as possible; however, late applicants should seek other means to meet payments deadlines and purchase books until financial aid funds can be released.

FEDERAL AND STATE AID PROGRAMS

The following programs are grants and do not require repayment:

Federal Pell Grant (PELL)

The Federal Pell Grant is the largest federal grant program and is made available to students who demonstrate financial need. Grants range from $400 to $4,050 per year and are awarded to both full-time and part-time students, based upon financial need. The application for the Pell Grant is the FAFSA and the IF.

Federal Academic Competitiveness Grant (ACG)

Pell Grant-eligible students who completed a rigorous high school program of study after January 1, 2005 and are enrolled full-time are eligible. First year award is $750; second year award is $1300. Apply through the FAFSA and the IF.

Federal Supplemental Education Opportunity Grant (FSEOG)

According to federal regulations, students must be Pell-eligible to receive FSEOG funds. Funds are awarded on a first-come, first-serve basis, so students should apply early to be considered for these monies. Award amounts vary up to $400 per year. Apply through the FAFSA and IF forms.

Federal Work Study Program (FWSP)

The Federal Work Study Program (FWSP) allows students to be employed at the College to earn money for educational expenses. Apply through the FAFSA. Awards are based on financial need and student request.

Ohio Instructional Grant (OIG) and Part-Time State Grant (PT State)

The Ohio Instructional Grant offers financial aid to students who are within state income guidelines, are Ohio residents and are full-time students enrolled in degree programs at an eligible Ohio college. Students in certificate programs are not eligible for OIG funds. The Ohio Part Time-State Grant offers tuition assistance to residents enrolled less than full-time. Apply through the FAFSA. Funding from either program may not exceed tuition. Eligible students will receive funding from only one of these programs based on this number of credit hours.

Ohio College Opportunity Grant (OCOG)

For Ohio residents only, enrolled for the first time during academic year 2006-2007 or thereafter. Eligibility based upon need and enrollment.

Military Grants

Branches of the U.S. military offer various financial aid opportunities.

Scholarships

Stark State College offers a wide variety of scholarship opportunities for qualified students. Additional information is available on the Web or in the Financial Aid Office.

Other sources of aid

Stark State College works closely with many local agencies to assist students in securing funds for college including the Bureau of Vocational Rehabilitation (BVR), the Workforce Initiative Association (WIA) and the Trade Adjustment Act (TAA). Additional information is available through the individual agency, on the Web or in the Financial Aid Office.

LOANS

The following programs are loans and must be paid back.

Federal Stafford Student Loan

The government offers the Subsidized Stafford Loan and the Unsubsidized Stafford Loan The federal government pays the interest on the loan while the student is enrolled in school. To apply, the student must complete a FAFSA, IF and Stafford Loan application. More information and appropriate forms may be obtained in the Financial Aid Office.

Federal Parent Loan for Undergraduate Students (PLUS)

Available to parents of dependent students who meet designated requirements.

Student Installment Program (SIP)

Stark State College offers a student installment program (SIP) which allows students to pay tuition and fees in three equal installments, instead of one lump sum, for a small fee. This option is offered automatically when the student registers for classes.

STANDARDS OF ACADEMIC PROGRESS

The Standards of Academic Progress Policy (SAP) is to ensure that any student who receives or applies for federal financial aid is making progress toward a degree. In order to maintain eligibility for aid, a student must meet the financial aid standards requirements. Failure to meet these requirements will result in the loss of federal aid until action is taken to regain eligibility. The aid programs affected by these standards requirements are: Federal Pell Grant; ACG, FSEOG; FWSP; Stafford Loan; and Federal PLUS. The OIG, the OCOG and the PT State Grant are not affected by this policy. The complete policy is available in the Financial Aid Office.

FINANCIAL AID STANDARDS REQUIREMENTS

Complete 67% of attempted credit hours per academic year. The total number of credit hours the student begins with on the seventh day of all semesters (summer session/fall semester/spring semester) is multiplied by 67%. This number represents the minimum number of credit hours the student must complete for the academic year. For example, if a student begins each of two sessions with 12 credit hours, the student must satisfactorily complete 16 hours by the end of the academic year.

Standards Requirements Example:

12 hours x 2 semesters = 24 hours
24 hours x .67 (67%) = 16 hours

Note:

- Only grads of A, B, C, D, or CR counts as successfully completed.
- Incompletes (I) do not count until changes to one of the grads listed above.
- Co-op and audit hours do not count in determining financial aid eligibility.

Complete a degree within the specific time

Associate degree . . . . . 105 enrolled hours
Certificate . . . . . 50 enrolled hours

Maintain grade point average

The students cumulative grade point average (GPA) will be reviewed to ensure the following minimums are met:

29 or less completed hours . . . . . 1.5 GPA
30 or greater completed hours . . . . . 2.0 GPA

The Financial Aid Standards of Academic are separate and apart from the Institutional Academic Standards.

Fees, Methods of Payment, Refunds and Residency Requirements

Stark State College of Technology is committed to providing an excellent college education at affordable cost to students. The College Board of Trustees, administration, staff and faculty work diligently to control costs and maintain efficiency of the College's operations.

The Board of Trustees of Stark State College of Technology reserves the right to revise the current schedule of tuition and fees at any time and without prior notice.

For a listing of our most current tuition and fees, visit the Stark State College Web site at:
www.starkstate.edu/registration/fee.htm

Printed copies of the current Schedule of Tuition and Fees are available in the following offices:

Office of Admissions/Student Services
Business Office
Financial Aid Office
Academic Records/Registrar's Office
Cashier's Office
Information Desk/Switchboard

Fees

APPLICATION/MATRICULATION FEE

The application/matriculation fee covers the cost of applying to the College, student assessment, the creation of a permanent student record and the entering of student information into the College's record-keeping system. The application/matriculation fee is a one-time fee payable upon first registration.

INSTRUCTIONAL FEE

The instructional fee supplements other sources of income to cover the cost of instruction and general operating expenses.

GENERAL FEE (Includes Technology and Facilities Fees)

The general fee supplements state subsidies for general institutional services. A portion of this fee is designated to support technology and facilities.

OUT-OF-STATE RESIDENTS TUITION SURCHARGE

A tuition surcharge per credit hour is assessed out-of-state students, in addition to the per credit hour in-state tuition.

LATE REGISTRATION FEE

A late registration fee will be charged to anyone registering and/or paying during late registration. Students may avoid this fee by registering and/or paying during open registration.

LOCKER FEE

A limited number of lockers are available for student use, for a small rental fee.

DENTAL HYGIENE FACILITY FEE

The dental hygiene facility fee supplements sources of income to cover the costs of dental hygiene instruction. The fee is charged each semester and is limited to dental hygiene students.

STUDENT INSTALLMENT PAYMENT PLAN FEE (SIPP)

Students electing to use the student installment plan to pay tuition and fees will be required to pay a small, non-refundable fee for the service.

CREDIT BY EXAMINATION FEE

Students, who demonstrate appropriate knowledge, may elect to "test out" of certain courses with permission from the Office of Admissions/Student Services. An examination fee is assessed.

PARKING DECAL FEE

Students are assessed a small fee for parking privileges in designated areas.

GRADUATION FEE

This is a one-time fee that covers the processing of documents necessary for commencement.

BACKGROUND CHECK FEE

For those who need to obtain some of their educational training off campus at a hospital, day care center or other business, a background check may be required. A fee is assessed to cover the cost of processing the background check.

Methods of Payment

PAYMENT IN FULL OF FEES

Payment of tuition and fees may be made in full, at the Cashier's Window, online, by mail or deposited in the payment drop box on the third floor of the Student Services Building. Fees may be paid with cash, check, money order, debit card, Visa/MasterCard/DiscoverCard.

STUDENT INSTALLMENT PAYMENT PLAN (SIPP)

Payment of tuition and fees may be made using the Student Installment Payment Plan (SIPP). A brochure explaining this plan is available in the Office of Admissions/Student Services or in the Business Office. A small, non-refundable fee is charged for this service.

SENIOR CITIZENS WAIVER

Citizens who are 60 years of age or older, and have paid the current application/matriculation fee, may take credit courses tuition-free on a space-available basis. All other fees are due when incurred.

Senior citizens will receive a 15% discount on course fees, for non-credit continuing education courses, by presenting their Golden Buckeye Cards at the time of registration. This discount applies to "in-person" registrations only and does not include special senior citizens classes or company-paid registrations.

Refunds

REFUND SCHEDULE

Students who wish to withdraw from courses in which they are enrolled and which are being conducted in accordance with the class schedule must complete academic withdrawal procedures to qualify for a refund. The following regulations apply to refunds:

Full refunds are given to students who enroll in classes that are cancelled by the College. Full refunds are given to students if the College does not permit the student to enroll or continue in coursework. Refunding of fees is automatic, and students are not required to complete academic withdrawal procedures.

Instructional fees, general fees, and tuition surcharge fees paid for **16-week semester courses** are subject to refund to students who officially withdraw for valid reasons at the following rates:

a) Before the seventh day of the semester - 100% refund.
b) On the seventh through the ninth day of the semester - 80% refund.
c) On the tenth through the sixteenth day of the semester - 60% refund.
d) On the seventeenth through the twentieth day of the semester - 40% refund.
e) On the twenty-first day of the semester and beyond - no refund.

Instructional fees, general fees, and tuition surcharge fees paid for **10-week semester courses** are subject to refund to students who officially withdraw for valid reasons at the following rates:

a) Before the seventh day of the semester - 100% refund.
b) On the seventh through the eleventh day of the semester - 60 % refund.
c) On the twelfth through the thirteenth day of the semester - 40% refund.
d) On the fourteenth day of the semester and beyond - no refund.

Instructional fees, general fees, and tuition surcharge fees paid for **8-week semester courses** are subject to refund to students who officially withdraw for valid reasons at the following rates:

a) Before the seventh day of the semester - 100% refund.
b) On the seventh through the eighth day of the semester - 60% refund.
c) On the ninth through the tenth day of the semester - 40% refund.
d) On the eleventh day of the semester and beyond - no refund.

Instructional fees, general fees, and tuition surcharge fees paid for **5-week semester courses** are subject to refund to students who officially withdraw for valid reasons at the following rates:

a) Before the seventh day of the semester - 100% refund.
b) On the seventh day of the semester and beyond - no refund.

The first day of the semester is defined as the official starting date of the semester or portion of the semester. Days of the semester will be counted as any Monday through Friday that classes are in session. Weeks of the semester will be counted as starting on the first day of the semester and every week thereafter. Holidays, Saturdays and Sundays will not be included as days of the term for those refund sections counting days. Holidays, Saturdays and Sundays will be included as days of the term for those refund sections counting weeks. For those classes meeting only once a week on Friday, Saturday or Sunday, the 100% refund period will extend through the Tuesday after the first scheduled class or through the sixth day of the semester, whichever is later.

The Business Office will audit each registration. If fees are paid under mistake of law or fact, appropriate charges or refunds will be made. All refunds will be made within thirty days of withdrawal or schedule change.

FINANCIAL AID ISSUES IN CASES OF WITHDRAWAL OR NON-ATTENDANCE

Students must maintain attendance in their scheduled classes to remain eligible for financial aid funds. Students who fail to maintain attendance in classes, withdraw or are dismissed before 60% of the term has passed, will have all or a portion of their federal aid eligibility rescinded. This will likely result in monies needing to be repaid to the College and/or the U.S. Department of Education.

MEDICAL REFUNDS

In the event of a severe or life threatening medical condition to the student or an immediate family member, a student may appeal for consideration above and beyond the normal refund policy. Such appeals must be made in writing no later than 30 days after the end of the semester and fully explain the circumstances involved and specify the consideration desired. The appeal must be accompanied by a signed physician's letter explaining the medical condition. Verbal or incomplete requests will be refunded according to the normal refund policy. All appeals will be reviewed within 30 days of receipt and students will be notified of the determination in writing. Documentation should be provided to the Bursar's Office.

Stark State College Residency Requirements

Payment of non-resident tuition surcharge is required of any student who does not qualify as a permanent resident of Ohio, as defined by the Ohio Revised Code, section 3333-1-10: Ohio Student Residency for State Subsidy and Tuition Surcharge Purposes.

INTENT, AUTHORITY AND DEFINITIONS

It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education while insuring that the same benefit is conferred on all bona fide domiciliaries of this state whose permanent residence and legal citizenship is in Ohio, and whose actual source of financial support is subject to Ohio taxation. This rule is adopted pursuant to Chapter 119 of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by Section 3333.31 of the *Ohio Revised Code*.

For purposes of this rule, a "Resident of Ohio for all other legal purposes" shall mean any person who maintains a 12-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the *Ohio Revised Code*; provided such person has not within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.

The dependent child of a parent or legal guardian, or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time self-sustaining employment and established domicile in the state of Ohio for reasons other than gaining the benefit of favorable tuition rates, shall be entitled to in-state residency.

"Financial support" as used in this rule, shall not include grants, scholarships and awards from persons or entities which are not related to the recipient.

An "institution of higher education" as used in this rule shall mean any university, community college, technical institute or college, general and technical college, medical college or private medical or dental college that receives a direct subsidy from the State of Ohio.

GENERAL RESIDENCY FOR SUBSIDY AND TUITION SURCHARGE PURPOSES

The following persons shall be classified as residents of the state of Ohio for subsidy and tuition surcharge purposes:

1. Dependent students, at least one of whose parents or legal guardian has been a resident of the state of Ohio for all other legal purposes for 12 consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.
2. Persons who have resided in Ohio for all other legal purposes for at least 12 consecutive months immediately preceding their enrollment in an institution of higher education and who are not receiving, and have not directly or indirectly received in the preceding twelve consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.
3. Persons who are living and are gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who are pursuing a part-time program of instruction at an institution of higher education.

SPECIFIC EXCEPTIONS AND CIRCUMSTANCES

1. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
3. Section 3345.32 of the Ohio Revised Code requires that male students who are Ohio residents, and must register for selective service, verify that they have registered with the selective service in order to be considered in-state residents to attend Ohio public colleges and universities.
4. Any alien holding an immigration visa or classified as a political refugee shall be considered a resident of the state of Ohio for state subsidy and tuition surcharge purposes in the same manner as any other student.
5. No person holding a student or other temporary visa shall be eligible for Ohio residency for these purposes.
6. A dependent person classified as a resident of Ohio for these purposes shall continue to be considered a resident during continuous full-time enrollment, and until his or her completion of any one academic degree program.
7. In determining residency of a dependent student, removal of the student's parents or legal guardian from Ohio shall not, during a period of 12 months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraph (C) (1) of this rule.
8. Any person once classified as a non-resident, upon the completion of 12 consecutive months of residency in Ohio for all other legal purposes, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding 12 consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident.
   Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of information regarding the source of a student's actual financial support to that end.
9. Any reclassification of a person who was once classified as a non-resident for these purposes shall have prospective application only from the date of such reclassification.
10. A person who is transferred by his employer beyond the territorial limits of the 50 states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
11. A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

Policies and Procedures

ACADEMIC REGULATIONS

Final grades are issued at the end of each semester. Letter grades earn a number of quality points per credit unit according to the following table:

A	—	Superior	4
B	—	Good	3
C	—	Average	2
D	—	Below Average	1
F	—	Failed	0
IN	—	Incomplete	0
NC	—	No Credit	0
W	—	Withdrawn	0
AU	—	Audit	0
CR	—	Credit	0

The student's grade-point average (GPA) is computed by the following formula:

$$\frac{\text{Total Quality Points Earned}}{\text{Total Units of Credit Attempted}} = \text{GPA}$$

For example, five courses worth three credits each would be a total of 15 units of credit. If the student earns one "A" (4 quality points x 3 credit hours = 12 quality points) and four "Bs" (3 quality points x 12 credit hours = 36 quality points), the total is 48 quality points. To compute grade point average, (GPA), divide the total quality points (48) by the total units of credit attempted (15), and the resulting GPA is 3.20. This formula is repeated below:

Grade	Credits	Quality Points
A *(4pts.)*	3	12
B *(3 pts.)*	12	36
	15	48

$$\frac{\textbf{48 total quality points}}{\textbf{15 credits attempted}} = 3.20 \text{ GPA}$$

Unless the student requests otherwise, grades are only available on the Student Access site at ***www.starkstate.edu/student***. Students should consult periodically with the instructor to check their academic progress.

ATTENDANCE POLICY STATEMENT

Attendance should be taken in all classes. This is necessary in order to document that students who are eligible for the federal financial aid funds comply with federal financial aid guidelines. Non-attendees must be dropped since the federal government mandates that federal monies for non-attendees who receive federal financial aid be returned. Therefore, Stark State will monitor class attendance for ALL students since it is not obvious which students receive federal financial aid funds. Students who receive federal financial aid and do not attend their classes risk having their financial aid cancelled or reduced.

GRADE OF INCOMPLETE (IN)

The grade of "IN" may be given when the student's work in the course has been passing but some specific course requirements have not been completed. To receive an "IN" before the end of the semester, the student must contact the instructor and request this grade. If the instructor agrees to grant an "IN" for the course, a written agreement shall be reached between student and instructor outlining the remaining requirements to receive a grade. Both the student and the instructor shall sign this agreement and a copy will be forwarded to the department head. The "IN" will not be computed in the student's grade-point average for that semester. Unless the requirements in the written agreement are met within 30 calendar days from the end of the semester in which the "IN" was issued, the grade will automatically revert to an "F". By special permission of the instructor and notification of the department head, this time limit may be extended for extenuating circumstances.

EARLY ALERT

Any student whose work is unsatisfactory (below "C" level) will receive an Early Alert letter from the Academic Records/Registrar's Office during the beginning of the fifth week of the semester to help the student improve his/her academic performance. The letter will advise the student to consult with his/her instructor, who may assist the student in improving academic performance and/or refer him/her to appropriate support services. The Early Alert letter is not part of the student's permanent academic record.

GRADE APPEAL

Students who wish to appeal a grade must initiate the process within 15 school days of the time the grade has been assigned. Students should first discuss the matter with the instructor. If the matter cannot be resolved, the student may initiate the formal grade appeal process. A copy of the grade appeal procedure can be obtained in the Office of Admissions/Student Services.

ACADEMIC FORGIVENESS POLICY/PROCEDURE

Students who wish to change their major or students who drop out of college after a semester due to poor academic performance and wish to return to college may find that their previous academic performance hinders admission to degree programs and reduces their overall GPA. Academic Forgiveness seeks to respond to those students who want an opportunity to remove grades of "D" or "F" from their overall GPA calculation.

Academic Forgiveness

- does not apply to coursework transferred from other institutions.
- is only applicable to Stark State College and does not impose any decision on other institution(s).
- may be used only once and it is not reversible.
- may affect financial aid eligibility; students should consult with Financial Aid before requesting Academic Forgiveness.
- does not apply to "F" grades given because of academic dishonesty.
- if approved, grades of "D" or "F" in courses that are not required in the current degree/certificate program will be removed from the student's overall GPA. However, the courses will remain on the student's official transcript and be designated with a special code for Academic Forgiveness.

The student must:

- be seeking a degree/certificate from Stark State College; a student who has already graduated may not request Academic Forgiveness.
- be enrolled in classes at Stark State College during the semester in which the Academic Forgiveness form is filed.
- complete a minimum of 6 credit hours from Stark State College with a minimum 2.0 GPA or better following the return to College or a change of major.
- submit a "Change of Major" form if changing major.
- request Academic Forgiveness before attempting 30 or more credit hours at Stark State College.

The student must submit a completed Academic Forgiveness form to the Academic Records/Registrar's Office. The information will be reviewed to determine eligibility and the student will be notified of the decision. There is no appeal of the decision if the student is not eligible due to not meeting the criteria for Academic Forgiveness. If Academic Forgiveness is approved, the Academic Records/Registrar's Office will determine which courses will be forgiven. Calculation of the student's GPA will reflect the adjustments and an updated transcript will be sent to the student. If Academic Forgiveness is not granted, the student may appeal directly to the Provost whose decision in the matter is final.

DROPPING COURSES

A student may drop from a course or from the College during the first 14 calendar days of any academic period by completing the Schedule Change form, which may be obtained from the Academic Records/Registrar's Office. Any changes made during this period will not become a part of the student's transcript.

Stark State College gives students an opportunity to drop a course or all courses without academic penalty provided that the courses are dropped on or before the published drop date. A student will not be dropped from a class simply because he or she stops attending. Dropping a course or courses is the student's responsibility; it is also the student's responsibility to be aware of the published drop date and to satisfy any financial obligations to the college. A student has not officially dropped a class until he or she has submitted a Schedule Change form to the Academic Records/Registrar's Office.

Beyond the deadline date through the end of the last class meeting, a student may receive a grade of "W" only upon consultation with the instructor and upon the judgment of the department chair and if an emergency or extenuating circumstance exists. Sufficient supporting documentation shall be provided by the student when making such a request.

Failure to complete a Schedule Change form will result in a grade of "F" being entered on the student's transcript at the end of the semester. Failure to attend class does not constitute a withdrawal.

Note: Students receiving federal financial aid funds may jeopardize future federal financial aid by withdrawing. For more information, contact the Financial Aid Office.

AUDITING COURSES

Students wishing to audit a course must indicate audit status on the registration form at the time of registration. Students who register for a class for credit may change to audit status during the first week of classes only. Students auditing classes must pay the credit hour tuition for that course.

REPEATED COURSES

When a student repeats a course, both grades will appear on the academic record, and the second grade shall be used in calculating the grade point average. Prior to registering for the course a third time (initial registration and two repeat registrations), including withdrawals, a student must meet with his/her academic advisor for development of an academic plan. Individual departments may have more restrictive guidelines.

WITHDRAWAL FROM THE COLLEGE

A student may withdraw from the College during the first 14 calendar days of any academic period by completing the Schedule Change form, which may be obtained from the Academic Records/Registrar's Office. Any changes made during this period will not become a part of the student's official transcript. A student has not officially withdrawn from the College until the submission of the "Schedule Change" form has been accepted by the Academic Records/Registrar's Office. Failure to complete this process will result in a grade of "F" for all classes. **Failure to attend class does not constitute withdrawal from the College.**

CHANGE OF MAJOR/OPTION

Change of major/option forms are available in the Academic Records/Registrar's Office.

REGISTRATION IN EXCESS OF 18 CREDIT HOURS

Students in good academic standing with no outstanding financial obligations to the college can register via the Web for 18 credit hours or less according to the dates and times published. Students wanting to take more than 18 credit hours must have an academic advisor's signature and must register for those hours in person in the Academic Records/Registrar's Office.

ACCESS TO STUDENT RECORDS

All information entered in a student's file is available for inspection by that student upon presentation of appropriate college identification except that information described in Sections 9.411, 9.412, 9.413 and 9.414 of the *Policies and Procedures* as adopted by the Board of Trustees of Stark State College.

PROCEDURE TO INSPECT AND REVIEW RECORDS

Students may request, in writing, the opportunity to inspect and review their records. The request should be made to the registrar and must specify records to be inspected and reviewed. Requests will be granted within a reasonable period of time, but such time is not to exceed 45 days after the request has been made.

Records will be inspected and reviewed by the student in the presence of the chief administrator of the department or the student's designee. Records may not be changed or deleted during the process of inspection and review. Students shall be advised of the right to challenge and the procedure to challenge any portion(s) of the student's College record. Upon written request, the student shall be provided with a copy of that portion(s) of the student's college record subject to challenge.

HEARING TO CHALLENGE CONTENT OF RECORDS

Students shall have an opportunity for a hearing to challenge the content of their College records, to ensure that the records are not inaccurate, misleading, or otherwise in violation of the privacy or other rights of students, and to provide an opportunity for the correction or deletion of any such inaccurate, misleading, or otherwise inappropriate data contained therein.

RELEASE OF STUDENT RECORDS TO EXTERNAL AGENCIES

Information will not be released from a student record or file to external agencies or persons without the express written consent of the student, except as provided by Section 438(b)(1) of Public Law 93-380.

DISSEMINATION OF INFORMATION CONTAINED IN SECTION 9.4

Copies of Section 9.4 (the guidelines which describe the College's policy on student records) of the *Policies and Procedures* as adopted by the Board of Trustees of Stark State College of Technology shall be made available by the Office of Admissions/Student Services to any student desiring the same.

PRESIDENT'S LIST

A *President's List* of the names of all eligible students who have achieved a grade point average of 4.0 for the semester will be posted on that semester's *President's List*. To be eligible, any student taking 15 credits or more during a semester, who has earned a grade point average of 4.0 during that semester, is placed on the *President's List* for outstanding academic achievement. Developmental course credits or credit earned in a course for which the grade of "credit" or "satisfactory" is achieved will not be counted as part of the 15 semester-credit minimum. No student who has an "IN" (incomplete) at the end of the semester is eligible.

DEAN'S LIST

A *Dean's List* of the names of all eligible students who achieved a grade point average of 3.5 or better for the semester will be posted on that semester's *Dean's List*.

To be eligible, students who have completed 12 credit hours or more during the semester will be listed as full-time on the *Dean's List*. Students who have completed at least six but fewer than 12 credit hours will be listed as part-time students. Students who have taken fewer than six credit hours during a semester will not be recognized on the *Dean's List*.

Developmental course credits or credit earned in a course for which the grade of "credit" or "satisfactory" is achieved will not be counted as part of the semester-credit minimum. No student who has an "IN" (incomplete), "D" or "F" at the end of the semester is eligible.

CROSS-REGISTRATION

Stark State College has made arrangements with Kent State University-Stark for cross-registration. To cross-register, students should contact the Office of Admissions/Student Services to obtain details for the program of interest.

ACADEMIC PROBATION/DISMISSAL

Probation is an emphatic message to alert the students that the quality of their work must improve if they are to obtain the minimum grades required for graduation.

Students who fail to maintain a cumulative grade point average of 2.00 will be placed on academic probation. Students placed on probation must show considerable improvement in coursework, or face being dismissed from the College. Students on academic probation must meet with and have their registration form signed by their academic advisor prior to registering in person in the Academic Records/Registrar's Office.

Students will be subject to academic dismissal if they have been on academic probation for one term and do not achieve the required cumulative grade point average for the hours attempted during the next term in which they are enrolled.

Removal of probation status for students is automatic when students raise their accumulated grade point average above a 2.00. After the following specified number of credit hours is attempted, students will be dismissed from the College if their cumulative grade point average falls below the following minimums:

Credit Hours	Cumulative Point Average
12	1.00
24	1.25
30	1.50
45	1.75
60+	2.00

However, students completing an academic term with a 2.00 grade-point average will not be dismissed from the College.

Students may apply for reinstatement after one term through the department chair and appropriate dean. Appeals to dismissal may be made to Appeals Committee. No student will be dismissed until completion of two terms.

HONESTY IN LEARNING

Stark State College of Technology supports honesty in learning as an institutional value; therefore, dishonesty – such as cheating, plagiarism, or furnishing false information to the College or its staff – will subject a student to disciplinary action which may include dismissal from the College.

Coursework - Work done for class, which a student submits as the student's own work, shall not contain that which has been obtained from another other than properly credited references, sources, and citations. The work which a student submits shall be prepared in accordance with course guidelines.

Exams - Work done on a test, exam, or quiz shall be the student's own and shall not contain that which has been obtained from an inappropriate source. A student shall not obtain nor seek to obtain advanced access to questions or advance copies of a test, exam or quiz.

A student who violates or assists another to violate the *Honesty in Learning* policy may be penalized with a failing grade for the specific work for which the dishonesty was committed. Additional violations may lead to more severe penalties, including failure of the course and/or dismissal from the College.

DISCIPLINARY PENALTIES FOR ACADEMIC DISHONESTY

- For a first offense, a grade of "F" *(specific value to be defined by instructor)* may be issued for the assignment in which dishonesty occurred.
- For a second offense *(not necessarily in the same course or term)* a grade of "F" may be issued for the course in which dishonesty has occurred.
- Any student who has been involved in three offenses *(not necessarily in the same course or term)* may be dismissed from the College immediately and suspended for the next full term. Upon readmission to the College, any future offense will cause the student to be dismissed immediately with no right to readmission.
- A student may appeal a course grade or suspension by following the Grade Appeal Procedure described in the *Policies and Procedures Manual*.

SEXUAL ASSAULT POLICY/CAMPUS CRIME ACT

At Stark State College, we take pride in the reputation we've established as a safe, secure campus. We worked hard to earn that reputation, and we will continue to work hard to maintain that reputation for the sake of our students, employees and the community. The College will not tolerate sexual assault of any kind. Sexual misconduct is socially irresponsible and violates the rights of the individual. No one has the right to assault someone else regardless of what a person says, does or wears. Sexual assault is a crime and will be dealt with accordingly.

The College has developed a policy to deal with sexual assault, including measures anyone can use to prevent or minimize their risk. For complete details on the College's policy, procedures and recommendations, as well as to review the College's overall crime statistics, check with the Campus Security Office.

STUDENT GRIEVANCE

Stark State College has a formal process for student grievances. The process must begin within 15 school days of the occurrence. A copy of the student grievance procedure may be obtained in the Office of Admissions/Student Services.

CIVIL RIGHTS COMPLIANCE COORDINATOR

The dean of admissions/student services serves as the Title IX and Section 504 Coordinator for Stark State College. The dean handles all student grievances in accordance with the Title IX and Section 504 regulations which incorporate appropriate due process standards and provides for the "prompt and equitable resolution of complaints" filed on the basis of sex and/or disability.

DISCRIMINATION GRIEVANCE PROCEDURE

Students at Stark State College who feel they are victims of discrimination on the basis of sex, disability, age, race or color may file a complaint with the College's civil rights compliance coordinator (330-494-6170, Ext. 4364) or the Office of Civil Rights, Cleveland Office, U.S. Department of Education, 600 Superior Avenue East, Suite 750, Cleveland, OH 44114-2611. Copies of the detailed *Grievance Procedure for Complaints Concerning Discrimination* are available to students upon request in the Office of Admissions/Student Services.

GRADUATION REQUIREMENTS/DEGREES

Stark State College of Technology confers the following degrees upon successful completion of a prescribed course of study:

- the associate of applied business (A.A.B.)
- the associate of applied science (A.A.S.)
- the associate of arts (A.A.)
- the associate of science (A.S.)
- the associate of technical studies (A.T.S.)

Minimal graduation requirements for degrees are:

- a grade point average of 2.00 or above.
- a grade point average of 2.00 or above in the technical major.
- successful completion of courses listed on the official program guide. Deviation from the specific program requirements requires approval from the department chair or appropriate dean.
- completion of the application for graduation form is required, along with payment of the graduation fee, no later than the published deadlines for the appropriate graduation (May or December) as indicated in guidelines published by the Academic Records/Registrar's Office. Information regarding graduation is also available at ***www.starkstate.edu***.

ACADEMIC HONORS

Various awards are offered for outstanding accomplishments in each curriculum to members of the graduating class.

Graduates in each curriculum will graduate "with high distinction," provided they have a GPA of 3.80 or better. Graduates in each curriculum will graduate "with distinction," provided their cumulative GPAs are 3.40 or above.

TRANSCRIPTS

An official copy of a student's record is issued upon written request to the Academic Records/Registrar's Office by the student or alumnus. Transcripts will not be issued to those students who have unpaid financial obligations with the College. Outstanding matters of this nature are handled by the Business Office.

TRANSFERABILITY OF CREDITS

Acceptance of credits earned at Stark State College is at the option of the receiving institution. Many institutions have specially designed transfer programs.

TRANSFER BACCALAUREATE PROGRAMS

Most colleges and universities in Ohio (and elsewhere in the nation) recognize the purpose and function of the two-year technical curricula, and therefore have developed, or are in the process of developing, special transfer (junior and senior year) programs for technical program graduates who wish to pursue baccalaureate degrees. Information on these programs is available in the Office of Admissions/Student Services. Students who plan to complete work on a baccalaureate degree after receiving their associate degree are urged to investigate transfer programs, and to discuss their plans with our counselors. A complete list of articulation programs or degree transfer options can be found at ***www.starkstate.edu/transfer***.

The transfer approach to baccalaureate degrees offers several advantages to the technical college graduate:

1. **Educational –** The transfer curriculum provides the student with a chance to major in the occupationally-related courses in the first two years and in liberal arts and more advanced occupational courses in the following years. Conversely, the typical B.A. or B.S. program is comprised chiefly of liberal art subjects during the first two years and occupationally related subjects during the last two years. The transfer curriculum has sometimes been called the "upside down" curriculum, but for many it is really "right-side-up," since it is educationally sound to move from the "particular and the concrete" to the "general and the abstract."
2. **Financial –** The transfer plan is economically feasible for most students because they can work in their chosen field while completing the baccalaureate program.
3. **Occupational –** Stark State College graduates have three options: begin full-time employment (they are job-ready); pursue their bachelor's degree full-time (they are prepared for additional higher education); or commence full-time employment and pursue additional education on a part-time basis (the employer often reimburses tuition charges). It should be noted that Stark State students can find out early in their education if their career choice meets their expectations.
4. Recognition – The attainment of a meaningful associate degree is an encouraging step at halfway point to the baccalaureate degree via the transfer approach, and represents an additional valid credential to prospective employers.

CATALOG-IN-FORCE

Requirements to earn a degree or certificate are based initially on the Catalog which is in force at the time of the student's initial enrollment. However, the College reserves the right to change course offerings and academic requirements without notice. These changes should not be to the disadvantage of the student during his or her enrollment. In that regard, the following guidelines determine which Catalog a student must follow in meeting program requirements:

- Students may elect to complete their coursework under the most recent Catalog and must comply with all of the new requirements for their program.
- Students who change majors must meet the requirements of the Catalog which is in force at the time they change majors.
- Students who transfer to another college or university and return to Stark State College will be readmitted under the Catalog which is in force at the time of readmission.
- Students who do not earn any credit hours in two calendar years must satisfy requirements of the Catalog in force at the time of re-enrollment.
- Dismissed students are readmitted under the Catalog which is in-force at the time of readmission.

Exceptions to the above may be necessary when changes in certification or licensure standards mandate changes in academic requirements or in College programs.

Questions concerning this policy should be directed to the Office of Admissions/Students Services.

STUDENT RESPONSIBILITY

Each student is responsible for complying with the regulations in this Catalog and with other published regulations of the College. Class schedule information is a supplement to the *College Catalog* and is also an official statement of policy, as is policy published on the Stark State Web site and in the *Student Handbook*.

The most current *Policies and Procedures* are available at ***www.starkstate.edu/policies***.

State of Ohio Policy for Institutional Transfer

The Ohio Board of Regents, following the directive of the Ohio General Assembly, has developed a statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the state policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio's higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

TRANSFER MODULE

The Ohio Board of Regents' *Transfer and Articulation Policy* established the *transfer module*, which is a specific subset or the entire set of a college or university's general education requirements. The *transfer module* consists of 37-39 semester hours of specified course credits in English, mathematics, arts and humanities, social science and natural science.

A *transfer module* completed at one college or university automatically meets the requirements of the *transfer module* at the receiving institution, once the student is accepted. Students may be required to meet additional general education requirements that are not included in the *transfer module*.

CONDITIONS FOR TRANSFER ADMISSION

Students meeting the requirements of the *transfer module* are subject to the following conditions:

1. The policy encourages receiving institutions to give **preferential consideration** for admission to students who complete the *transfer module* and either the associate of arts or the associate of science degrees. These students will be able to transfer all courses in which they received a passing grade of "D" or better. Students must have an overall grade point average of 2.0 to be given credit for the *transfer module*.
2. The policy also encourages receiving institutions to give **preferential consideration** for admission to students who complete the *transfer module* with a grade of "C" or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the *transfer module* and only courses in which a "C" or better has been earned will transfer.
3. The policy encourages receiving institutions to admit on a **non-preferential consideration** basis students who complete the *transfer module* with a grade of "C" or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of "C" or better.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of Catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

RESPONSIBILITIES OF STUDENTS

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

APPEAL PROCESS

Transcripts for coursework completed at other regionally accredited colleges and universities are reviewed by the Office of Admission/Student Services to determine appropriate transfer.

If a student is not satisfied with regard to transfer credit application, the student should pursue the following appeals process to resolve the situation:

1. Meet with transcript evaluator or an admissions counselor to discuss the credit in question.
2. If there is no resolution in step one, meet with the dean of admissions/student services to further discuss the matter.
3. If there is no resolution in step two, the student will be directed by the dean of admissions/student services to meet with the provost to further discuss the matter.

If a student's request is denied by the provost and further appeal is requested, the provost will direct the student to file an appeal to: Articulation and Transfer Appeals Review Committee, Ohio Board of Regents, 30 East Broad Street, 36th floor, Columbus, Ohio 43215-4314.

Students appealing the transfer of their credits will need to provide the College with appropriate materials to aid in determining applicable transfer credit.

The Appeals Review Committee shall review and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability to transfer credits at receiving institutions.

HOW TO APPLY

Current or returning students should discuss this option with their academic advisor or a student service counselor. The *transfer module* is intended to be completed in cooperation with your area of study.

THE STARK STATE COLLEGE OF TECHNOLOGY TRANSFER MODULE

Field	**General education requirements applied to *transfer module***	**Additional general education requirements**	**Additional general education requirements beyond the *transfer module* for graduation**
ENGLISH *minimum* *6 semester hours*	ENG124 (3) *Plus one of the following:* ENG123 (3), ENG221 (3), ENG224 (3) *(6 semester hours)*		*Select one course:* COM121 (3), COM122 (3), COM123 (3) *(3 semester hours)*
MATHEMATICS *minimum* *6 semester hours*	Select two courses: MTH122 (3), MTH123 (3), MTH221 (3), MTH222 (3)MTH 223 (4), *(6-7 semester hours)*		
ARTS and HUMANITIES *minimum* *6 semester hours*	PHL122 (3) *Plus one of the following Kent State-Stark courses:* ARCH11013 ART12001 or 22006 ENG22055, 23079 or 24071 HIST11050, 11051, 12070 or 12071 MUS22111 PAS23101 or 23102 *(6 semester hours)*		
SOCIAL SCIENCE *minimum* *6 semester hours*	*Select two courses:* PSY121 (3), SOC121 (3), SOC122 (3), SOC123 (3), SOC225 (3) *(6 semester hours)*	*Select one PSY/PSC course and/or one BUS course:* PSY122 (3), PSY123 (3), PSY124 (3) PSY221 (3), PSC121 (3), BUS122 (3), BUS221 (3), BUS222 (3) *(3 semester hours)*	
NATURAL and PHYSICAL SCIENCE* *minimum* *7-8 semester hours*	*Select two courses:* BIO101 (3), BIO121 (4), BIO122 (4) BIO126 (4), BIO127 (4), BIO221 (4), CHM101 (4), CHM121 (4), CHM122 (4), PHY101 (4), PHY121 (4), PHY122 (4) PHY221 (4), PHY222 (4) **Must include at least one laboratory course.* *(7-8 semester hours)*		
		Select two additional courses from column 2 and/or 3 for	
TOTAL	**31-33 SEMESTER HOURS**	**6 SEMESTER HOURS**	**3 SEMESTER HOURS**

English and Communications

Effective Speaking	COM121
Communication Theory	COM122
Intergroup Communications	COM123

Mathematics

College Algebra and Trigonometry II	MTH122
College Algebra	MTH123
Concepts of Calculus	MTH221
Statistics	MTH222
Analytic Geometry – Calculus I	MTH223

Arts and Humanities

Ethics	PHL122
Understanding Architecture+	ARCH11013
Art Survey+	ART12001
Art History I: Ancient and Medieval Art+	ART22006
Intro. to Shakespeare+	ENG22055
Major Modern Writers:	
British and United States+	ENG23079
Great Books I+	ENG24071
History of Civilization I+	HIST11050
History of Civilization II+	HIST11051
History of the U.S., The Formative Period+	HIST12070
History of the U.S., The Modern Period+	HIST12071
The Understanding of Music+	MUS22111
Interpreting the Black Experience I+	PAS23101
Interpreting the Black Experience II+	PAS23102

Social Science

General Psychology	PSY121
Sociology	SOC121
Sociology and Technology	SOC122
Dynamics of the Family	SOC123
Cultural Diversity	SOC225

Natural and Physical Science

Introduction to Anatomy and Physiology	BIO101
Anatomy and Physiology I	BIO 121
Anatomy and Physiology II	BIO122
Science, Energy and the Environment	BIO126
Human Biology	BIO127
Principles of Microbiology	BIO221
Introduction to Chemistry	CHM101
General Chemistry	CHM121
Organic and Biological Chemistry	CHM122
Principles of Physics	PHY101
Physics I	PHY121
Physics II	PHY122
Physics I with Calculus	PHY221
Physics II with Calculus	PHY222

+Indicates courses offered at Kent State-Stark Campus

Drug Free Schools and Communities Act Amendments of 1989 Policy

ALCOHOL

Effects of Occasional and Extended Use

Impotence and infertility; high blood pressure; heart attacks; strokes; cirrhosis of the liver; cancer of the liver, stomach, esophagus or larynx; stomach ulcers; colitis; fetal alcohol syndrome; premature aging; birth defects; slowed reaction; slurred speech; unconsciousness.

Criminal Sanctions/Penalties

- Purchase under 21: Maximum fine of $1,000
- Possess or consume under 21: Maximum fine of $100
- Open container violation: Maximum fine of $1000
- Consumption in a motor vehicle: Maximum confinement of 30 days.

MARIJUANA

Effects of Occasional and Extended Use

Chronic lung cancer; brain damage; high blood pressure; diminished immunity; premature aging; impairment of memory; diminished motor skills; birth defects; fetal alcohol syndrome; mood swings; loss of ambition; increased apathy; decline in school and work performance.

Criminal Sanctions/Penalties

- Unlawful possession of use: Maximum penalties, depending on amount, may result in fine of $5,000 and/or maximum confinement of 10 years.
- Sell, offer to sell, or distribute for sale: Maximum fine of $7,500 and/or maximum confinement of 25 years.

NARCOTICS: Cocaine, Crack Cocaine

Effects of Occasional and Extended Use

Seizures; stroke; cardiac or respiratory arrest; convulsions; delirium and paranoia; insomnia; anxiety; irritability; nasal problems; powerful addiction; disorientation.

Criminal Sanctions/Penalties

- Possession or use: Ranges from rehabilitation programs to substantial years of confinement and fines.
- Sell, offer to sell, and distribute for sale; Penalty determined by the amount of substance, with fines in large amounts (exceeding $1,000,000) and life imprisonment.

NARCOTICS: Heroin, Opium, Morphine

Effects of Occasional and Extended Use

Cardiac arrest; vein inflammation; insomnia; serum hepatitis; convulsions; skin abscesses; death; physical dependence; difficulty breathing; nausea; constricted pupils; panic.

Criminal Sanctions/Penalties

- Possession or use: Ranges from rehabilitation programs to substantial years of confinement and fines.
- Sell, offer to sell, and distribute for sale; Penalty determined by the amount of substance, with fines in large amounts (exceeding $1,000,000) and life imprisonment.

NARCOTICS: Other Controlled Substances (LSD, PCP)

Effects of Occasional and Extended Use

Hallucinations; distortion of senses; memory loss; disruption of motor skills; permanent cognitive damage; bizarre behavior; severe disorientation.

Criminal Sanctions/Penalties

- Possession or use: Ranges from rehabilitation programs to substantial years of confinement and fines.
- Sell, offer to sell, and distribute for sale; Penalty determined by the amount of substance, with fines in large amounts (exceeding $1,000,000) and life imprisonment.

NARCOTICS: Depressants (Barbiturates and Tranquilizers)

Effects of Occasional and Extended Use

Death; coma; altered perception; physical dependence; dangerous withdrawal symptoms; staggered walk; difficulty breathing; slurred speech; psychological dependence.

Criminal Sanctions/Penalties

- Possession or use: Ranges from rehabilitation programs to substantial years of confinement and fines.
- Sell, offer to sell, and distribute for sale; Penalty determined by the amount of substance, with fines in large amounts (exceeding $1,000,000) and life imprisonment

Note: Distribution of controlled substances in or near schools and colleges can result in penalties twice the regular for the same offense. Trafficking in drugs can result in forfeiture of property including motor vehicles, vessels, money, real property and other personal property.

COLLEGE SANCTIONS

Students – The unlawful use, possession, sale, manufacture, or distribution of drugs and alcohol subjects any student discipline pursuant to established College procedures and to sanctions up to and including suspension or dismissal from the College. Any student violating this policy or otherwise engaging in illegal conduct will also be referred for criminal prosecution.

College Employees – Under the influence, possession, or use, furnishing to a minor: Sanctions up to and including termination.

Any employee engaging in the illegal use, possession, sale, manufacture, or distribution of drugs and alcohol will be subject to disciplinary procedures outlined in the *Policy and Procedure Manual* with sanctions up to and including termination from the College.

SUPPORT AND RESOURCES

Twelve Step Programs are self-help groups based on the spiritual concepts of Alcoholics anonymous. They are often used as inpatient and outpatient treatment aftercare.

Some Twelve Step Programs available:

- Adult Children of Alcoholics
- Alcoholics Anonymous
- Co-dependency Anonymous
- Cocaine Anonymous
- Narcotics Anonymous
- Overeater Anonymous

These local information and referral agencies can give you information about assessment, treatment and support resources:

- Alcohol and Drug Assistance - 330-453-8811
- Crisis Intervention Center - 330-452-6000 or 1-800-956-6630
- Stark State College STConnection
- Stark State College Office of Admissions/Student Services
- Stark State College Security Department
- Interfaith Campus Ministry
- Quest Recovery and Prevention Services - 330-453-8252

SSCT CONCEALED WEAPONS POLICY

The use, possession or carrying of a handgun or other weapon by any person, who is not a professional law enforcement officer, on college property is prohibited and in violation of State law.

Business Technologies

In today's world, businesses demand highly-skilled employees who are oriented to the preparation, interpretation and use of verbal, written and number-based data.

Businesses also require employees to be skilled in the latest technology. Stark State's business technologies division provides 57 offerings in associate degrees, options and certificate programs to meet the demands of today's rapidly changing workplace. Studies are available in the following career fields:

- accounting
- administrative information
- automotive
- business management
- financial services
- information reporting
- legal assisting
- marketing management
- operations management

Business Technologies Mission Statement

To provide a current, relevant and quality-driven technical education to those seeking to pursue or expand careers in business-related fields. Through experienced, degreed faculty, the division delivers demand-driven curriculum with a professional, customer-service focused organization.

The Business @ a Distance Consortium is an exciting collaboration by several Ohio two-year colleges to deliver Web-based business course options to Stark State's associate of applied business degree in business management technology. For more information regarding this innovative program, refer to the business management technology – business @ a distance online option page in this section.

FRANKLIN UNIVERSITY
Your potential. Our promise.

COLLEGE TECH PREP
A COLLEGE TECH PREP PARTICIPANT

KENT STATE UNIVERSITY STARK

TSU
TRI-STATE UNIVERSITY
A PRIVATE UNIVERSITY FOUNDED IN 1884

Accounting Technology

Accounting Services for Health Administration Option

Health Care is a rapidly growing and changing field today, not only from the perspective of the patients, medical professionals, insurance and pharmaceutical companies, but also from the accounting and finance professionals who gather and report this information.

This option is for the future accountant who would like to work primarily in the area of hospital finance and accounting. Our program is concentrated on the essential accounting courses that every accountant needs for their profession, but also adds medical terminology, the basics of health care delivery systems, the complex world of reimbursements and insurance, and the legal aspects of the medical profession.

The goal is that graduates with this option will have the training to be employable in a hospital or health care facility accounting and/or finance department. In addition, the accounting and finance department at Stark State College has numerous articulation agreements with two and four-year institutions. This will enable the graduate to transfer credits to pursue a baccalaureate degree in accounting, finance, or management. With additional coursework at Stark State or as part of their baccalaureate program, the graduate would also be eligible to pursue professional certifications, such as the CPA or CMA.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BUS121	Business Administration	4
ACC132	Financial Accounting*	4
BUS123	Business Mathematics	4
BIO125	Medical Terminology**	3
OAD105	Computer Applications Excel	1
		19
Semester II		
ENG230	Business Communication	3
ACC221	Intermediate Accounting I	4
ACC133	Managerial Accounting	4
ACC127	Quantitative Business Statistics	3
HIT230	Health Care Delivery in the U.S.**	2
OAD106	Computer Applications Access	1
		17
Semester III		
COM121	Effective Speaking	3
BUS221	Microeconomics	3
ACC223	Cost Accounting	4
ACC232	Governmental and Not-For-Profit Accounting	4
MAT231	Reimbursement for Health Care Services**	3
		17
Semester IV		
ACC237	Fraud Examination	4
FIN220	Principles of Finance	4
ACC228	Business Taxation	4
ACC229	Computerized Accounting Applications	3
HIT123	Healthcare Legal and Ethical Issues**	2
		17

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Students may select both ACC121 and ACC122 in place of this course.
** Students must take health courses in the sequence as shown.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Accounting Technology

Certified Public Accountant (CPA) Option

Accounting is a challenging and dynamic profession. A certified public accountant (CPA) is a leader in that profession with the ability to provide a wide variety of client services including auditing, tax preparation and planning, financial statement preparation and consulting. In addition, CPAs work for companies, governmental entities and not-for-profit entities preparing and analyzing financial information for use by internal and external decision makers.

Under the Ohio Revised Code, in order to sit for the Uniform CPA Examination, a candidate must have obtained at least an associate degree with a concentration in accounting that includes related courses in other areas of business administration. The accounting technology – certified public accountant option curriculum meets the associate degree requirements as set forth in the code. Upon completing the curriculum, a candidate must take and earn a minimum score on the Graduate Record Exam prior to being allowed to sit for the CPA Exam. After four years of approved work experience, a successful candidate may be certified.

The goal is that students successfully completing the accounting technology – certified public accountant option will be exposed to all the tools and skills necessary to be successful in an accounting career. They will have covered all the technical knowledge required and practiced its application. In addition, they will have been exposed to all of the technical subject material covered on the Uniform CPA exam. Students will demonstrate their acquired knowledge and abilities throughout the program within individual classes and in the capstone course.

The current business environment requires all prospective employees to have good communication skills, both written and oral, and to be able to interact with co-workers and clients in a professional manner. Employers also expect workers to have strong computational skills, to be computer literate and to be able to think critically. All students completing a program at Stark State College will be introduced, provided practice in, and be expected to master these basic competencies.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BUS123	Business Mathematics	4
BUS121	Business Administration	4
ACC132	Financial Accounting*	4
ACC127	Quantitative Business Statistics	3
		18
Semester II		
ENG230	Business Communication	3
BCA120	Business Computer Applications***	4
ACC221	Intermediate Accounting I	4
ACC133	Managerial Accounting	4
BUS221	Microeconomics	3
		18
Semester III		
COM121	Effective Speaking	3
ACC124	Individual Taxation	4
ACC222	Intermediate Accounting II	4
ACC223	Cost Accounting	4
	Accounting Elective****	3/4
		18/19
Semester IV		
ACC225	Auditing	4
FIN220	Principles of Finance	4
ACC130	Business Law and Ethics	3
	Social Sciences Elective**	3
	Accounting Elective****	3/4
		17/18

71/73 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Student may select both ACC121 and ACC122 in place of this course.
** Student may select from PSY121, PSY124, SOC121, SOC122 or SOC225.
*** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
**** Student should select from ACC226, ACC228, ACC232 or BTD223.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Accounting Technology

Computer Information Option

The accounting technology – computer information option curriculum should provide the student with a foundation in accounting theory, and related courses in other areas of business, along with a highly developed computer competency. The student will learn a number of the most widely used software applications such as Microsoft Word, PowerPoint, Excel, Access and QuickBooks and how to use them to implement accounting functions.

These courses should provide the student with the necessary computer skills to effectively communicate and present data and materials to co-workers and clients. The students' exposure to computer application software and database development using Access, in conjunction with the traditional accounting courses, should provide the accounting student with a rounded solid computer-based accounting degree.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BUS123	Business Mathematics	4
BUS121	Business Administration	4
ACC132	Financial Accounting*	4
ACC127	Quantitative Business Statistics	3
		18
Semester II		
ENG230	Business Communication	3
ECA122	Computer Applications for Technical Professionals**	3
ACC221	Intermediate Accounting I	4
ACC133	Managerial Accounting	4
BUS221	Microeconomics	3
		17
Semester III		
COM121	Effective Speaking	3
ACC124	Individual Taxation	4
ACC229	Computerized Accounting Applications	3
ECA148	Spreadsheet Analysis	3
	Accounting Elective I***	3/4
		16/17
Semester IV		
ACC225/ACC237	Auditing or Fraud Examination******	4
ECA152	Microsoft Access Database	3
ACC130	Business Law and Ethics	3
	Social Sciences Elective****	3
	Accounting Elective II*****	3
		16

67/68 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Student may select both ACC121 and ACC122 in place of this course.
** Successful completion of BCA120 or OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for ECA122.
*** Student may select from ACC227, ACC228, ACC234 or BTD223.
**** Student may select from PSY121, PSY124, SOC121, SOC122 or SOC225.
***** Student may select from ECA139, ECA253, or ECA228.
****** Course should be chosen following consultation with academic advisor.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Accounting Technology

Corporate Option

The accounting technology – corporate option curriculum gives students the solid foundation in accounting theory that is necessary for entry-to upper-level accounting positions and career advancement. Job opportunities include corporate accounting in the areas of financial information preparation, reporting, and analysis or cost accounting; governmental accounting; not-for-profit accounting; and accounting for partnerships or sole proprietorships.

The goal is that students successfully completing the accounting technology – corporate option will be exposed to all the tools and skills necessary to be successful in an accounting career. They will have covered all the technical knowledge required and practiced its application. In addition, they will have been exposed to all of the technical subject material covered on the Uniform CPA Exam. Students will demonstrate their acquired knowledge and abilities throughout the program within individual classes and in the capstone course.

The current business environment requires all prospective employees to have good communication skills, both written and oral, and to be able to interact with co-workers and clients in a professional manner. Employers also expect workers to have strong computational skills, to be computer literate and to be able to think critically. All students completing a program at Stark State College will be introduced, provided practice in, and be expected to master these basic competencies.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BUS123	Business Mathematics	4
BUS121	Business Administration	4
ACC132	Financial Accounting*	4
ACC127	Quantitative Business Statistics	3
		18
Semester II		
ENG230	Business Communication	3
BCA120	Business Computer Applications***	4
ACC221	Intermediate Accounting I	4
ACC133	Managerial Accounting	4
BUS221	Microeconomics	3
		18
Semester III		
COM121	Effective Speaking	3
ACC228	Business Taxation	4
ACC222	Intermediate Accounting II	4
ACC223	Cost Accounting	4
	Accounting Elective****	3/4
		18/19
Semester IV		
ACC225	Auditing OR	
ACC237	Fraud Examination*****	4
FIN220	Principles of Finance	4
ACC130	Business Law and Ethics	3
	Social Sciences Elective**	3
	Accounting Elective****	3/4
		17/18

71/73 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Student may select both ACC121 and ACC122 in place of this course.
** Student may select from PSY121, PSY124, SOC121, SOC122 or SOC225.
*** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
**** Student should select from ACC226, ACC227, ACC229 or ACC234 or BTD223.
***** Course should be chosen following consultation with academic advisor.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Accounting Technology

Tax Option

Every time the Congress tries to simplify the Internal Revenue Code, it becomes more complicated and more tax forms are required.

These "simplifications" have created a need by businesses and certified public accounting firms for employees who have the knowledge of accounting and business transactions and are able to convert that into tax return preparation and tax savings by understanding the tax laws.

It is acceptable to arrange your business affairs to pay the least amount of taxes as legally possible. This is accomplished with an understanding of accounting transactions and taxation law.

The goal is that the graduate will be able to apply their accounting and tax knowledge to a company's tax department or become employed by a certified public accountant in their tax department. The entrepreneur should be able to start an accounting and tax practice to work with many of the small businesses that need assistance in this area.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BUS123	Business Mathematics	4
BUS121	Business Administration	4
ACC132	Financial Accounting*	4
ACC127	Quantitative Business Statistics	3
		18
Semester II		
ENG230	Business Communication	3
BCA120	Business Computer Applications***	4
ACC221	Intermediate Accounting I	4
ACC133	Managerial Accounting	4
ACC124	Individual Taxation	4
		19
Semester III		
COM121	Effective Speaking	3
BUS221	Microeconomics	3
ACC222	Intermediate Accounting II	4
ACC223	Cost Accounting	4
	Accounting Elective****	3/4
		17/18
Semester IV		
ACC225/ACC237	Auditing or Fraud Examination*****	4
FIN220	Principles of Finance	4
ACC130	Business Law and Ethics	3
	Social Sciences Elective**	3
	Accounting Elective****	3/4
		17/18

71/73 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Student may select both ACC121 and ACC122 in place of this course.
** Student may select from PSY121, PSY124, SOC121, SOC122 or SOC225.
*** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
**** Student should select two from ACC228, ACC233, BTD223 or FIN223.
***** Course should be chosen following consultation with academic advisor.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Accounting Technology

Bookkeeping One-Year Certificate

Stark State College offers a one-year certificate program in bookkeeping for non-degree-seeking students. Students may apply credits earned in this certificate program to the accounting associate degree program. Students will be awarded a certificate in bookkeeping upon completion of the courses listed. Students must still pass the Certified Bookkeepers Examination to become certified. This examination is administered by the American Institute of Professional Bookkeepers.

Many students opt to pursue an associate degree in accounting after receiving a bookkeeping certificate.

The goal is that the students successfully completing the one-year bookkeeping certificate will be exposed to all the tools and skills necessary to be successful in the undertaking of entry level positions in the field of accounting. Areas of entry may include, but are not limited to bookkeeper, accounts receivable specialist and accounts payable specialist.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ACC121	Principles of Accounting I**	4
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
		19
Semester II		
ACC122	Principles of Accounting II**	4
ACC229	Computerized Accounting Applications	3
ACC227	Payroll Accounting	3
ENG230	Business Communication	3
ACC130	Business Law and Ethics	3
		16

35 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
** Successful completion of ACC132 may be substituted for ACC121 and ACC122.

Students must still pass the Certified Bookkeepers Examination to become certified. This examination is administered by the American Institute of Professional Bookkeepers.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Accounting Technology

Enrolled Agent One-Year Certificate Program

Preparing tax returns is becoming more and more complicated. The potential penalties and interest for return preparation mistakes can be expensive. This has created a need for qualified tax preparers. This is evidenced by the growth of tax preparation companies, such as H&R Block and Jackson Hewitt.

Only three professions, attorney, certified public accountant and enrolled agent, can represent a taxpayer before the Internal Revenue Service.

For the person who wants to prepare tax returns without taking all the additional course study required to become an attorney or a certified public accountant, this certificate and passing the *Enrolled Agent Exam* administered by the IRS, satisfies that need. It is a tax-oriented curriculum with the emphasis on taxation.

The curriculum covers individual tax, corporate and business taxes, non-profit taxation and estate and income tax planning. The capstone course of Advanced Taxation Topics will be a summary of all prior courses. The next step is to sit for the Enrolled Agent Examination, administrated by the Internal Revenue Service.

The goal is that graduates will sit for and pass the Enrolled Agent Examination. Upon passing the examination, the graduate will be able to be employed by a tax return preparation company or a certified public accounting firm. The entrepreneur should be able to start a tax return preparation business.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ACC132	Financial Accounting**	4
ACC124	Individual Taxation	4
BCA120	Business Computer Applications*	4
ACC130	Business Law and Ethics	3
ENG124	College Composition †	3
		18
Semester II		
ACC228	Business Taxation	4
FIN223	Estate and Income Tax Planning	3
FIN222	Retirement Planning and Employee Benefits	3
ENG230	Business Communication	3
ACC233	Advanced Taxation Topics	4
		17

35 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
** Student may select both ACC121 and ACC122 in place of this course.

Students must still pass the Enrolled Agent Examination to become certified. This examination is administered by the International Revenue Service (IRS).

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Accounting Technology

Fundamental Payroll One-Year Certificate

A small business operating as a sole-proprietor wants to add their first employee. What has to be done to add this employee? A federal identification number has to be applied for, the business must register as a withholding agent with the State of Ohio and possibly the city where the business is located. An application has to be submitted to the Ohio Job and Family Services and the Ohio Bureau of Workers Compensation. That is just to get started.

The accounting records have to be modified to accommodate all the new accounts that payroll, payroll tax withholding and payroll tax expense require. Quarterly, semi-annual and annual payroll tax forms are required. Who is going to do all this for the small business?

Large companies employ payroll people in their payroll department as well. Compliance with federal and state payroll and employee laws has created the need for the payroll professional.

The goal for the graduate of the fundamental payroll certificate program is to successfully pass the Fundamental Payroll Examination administrated by the American Payroll Association. The graduate would be able to assist the previously described small business and all others like them.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ACC132	Financial Accounting**	4
ACC227	Payroll Accounting	3
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
		18
Semester II		
ACC234	Advanced Payroll	3
ACC229	Computerized Accounting Applications	3
ACC130	Business Law and Ethics	3
ENG230	Business Communication	3
ACC124	Individual Taxation	4
		16

34 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
** Student may select both ACC121 and ACC122 in place of this course.

Students must still pass the Fundamental Payroll Examination to become certified. This examination is administered by the American Payroll Association.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Administrative Information Technology

Due to the automation of administrative functions, there are tremendous opportunities and career choices for administrative professionals with skills in information management software and office technology.

Administrative professionals are required to have strong technical and interpersonal skills and function as an integral part of work groups and management teams in work environments. Skills acquired in the administrative information technology degree program create paths to other careers in computers, desktop publishing, administration, human resources and management.

The administrative information technologies department utilizes alternative delivery methods. Many courses are Web-enhanced or Web-delivered. Day, evening, Saturday and once-a-week sessions are offered.

The goal is that graduates will be able to organize work areas, use resources, make decisions and exhibit proficiency in the use of office procedures and information systems used in automated office environments; apply practical knowledge and utilize technical skills such as keyboarding, transcription, speech recognition, proofreading, document production, microcomputer applications, records management, and the use of the Internet; demonstrate employability skills and professionalism through sound work habits, ethics and responsibility, and work in individual, team and group settings; communicate ideas and information verbally and in written form; have computational skills for solving business problems and for making analytical judgments; acquire, organize and evaluate information for making decisions and solving problems in business environments.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
OAD130	Communication and Transcription Skills	3
OAD121	Keyboarding/Formatting	3
BUS123	Business Mathematics	4
BCA120	Business Computer Applications**	4
BUS121	Business Administration	4
		21
Semester II		
OAD127	***Word Processing – Microsoft Word***	***3***
ACC121	Principles of Accounting I	4
ENG230	Business Communication	3
OAD129	Keyboarding Skillbuilding *(8 wks)*	1
OAD131	Graphic Design Concepts	3
OAD132	Records Management	3
		17
Semester III		
OAD226	***Spreadsheets - Microsoft Excel***	***3***
ACC130	Business Law and Ethics	3
	Social Sciences Elective*	3
OAD104	***Computer Applications - PowerPoint*** *(8 wks)*	***1***
COM121	Effective Speaking	3
OAD128	Desktop Publishing – Microsoft Publisher	3
		16
Semester IV		
BUS122	Basic Economics	3
OAD227	Administrative Procedures and Systems	3
OAD232	Administrative Information Technology Practicum	3
OAD236	***Database Applications – Microsoft Access***	***3***
OAD107	Digital Technologies *(8 wks)*	1
OAD108	Microsoft Outlook *(8 wks)*	1
OAD238	Microsoft Front Page	3
		17

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select from SOC121 or PSY121.
** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

Students who are enrolled at the College for at least one semester and who have passed the Certified Professional Secretary (CPS) examination are eligible to receive credit toward an associate of applied business degree in administrative information technology, subject to the review and approval of the appropriate department chair.

Microsoft Office Specialist Authorized Testing Center

Bold italicized courses indicate courses that contain content for Microsoft Office Specialist (MOS) certification.

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In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

In order to keep pace with progress, the College reserves the right to change fees, academic programs, course descriptions, or any other statements, contained in this catalog at the discretion of the College or its Board of Trustees. Please refer to www.starkstate.edu for the most current information.

Administrative Information Technology

Management Option

Technology and organizational restructuring have led the administrative professional to assume responsibilities once reserved for managerial and professional staff. While the core responsibilities for the administrative professional have remained the same, this position is now handling more managerial/supervisory duties, such as higher level decision making, project coordination, payroll, conflict management, Internet research and information management. The administrative information technologies department utilizes alternative delivery methods. Many courses are Web-enhanced or Web-delivered. Day, evening, Saturday and once-a-week sessions are offered.

The goal is that graduates will be able to organize work areas, use resources, make decisions and exhibit proficiency in the use of administrative procedures and information systems used in automated office environments; apply practical knowledge and utilize technical skills such as keyboarding, voice recognition, proofreading, document production, integrated computer applications, records management, payroll, and Internet usage; demonstrate employability skills and professionalism through sound work habits, ethics and responsibility, and work in individual, team and group settings; communicate ideas and information verbally and in written form; have computational skills for solving business problems and for making analytical judgments; acquire, organize and evaluate information for making decisions and solving problems in business environments.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
OAD130	Communication and Transcription Skills	3
OAD121	Keyboarding/Formatting	3
BUS123	Business Math	4
BCA120	Business Computer Applications**	4
BUS121	Business Administration	4
		21
Semester II		
OAD127	***Word Processing Microsoft Word***	***3***
ACC121	Principles of Accounting I	4
ENG230	Business Communication	3
OAD104	***Computer Applications PowerPoint (8 wks)***	***1***
MGT121	Principles of Management	3
OAD132	Records Management	3
		17
Semester III		
OAD226	***Spreadsheets Microsoft Excel***	***3***
ACC130	Business Law and Ethics	3
	Social Science Elective*	3
MGT221	Supervision	3
OAD107	Digital Technologies *(8 wks)*	1
OAD108	Microsoft Outlook *(8 wks)*	1
ACC227	Payroll Accounting	3
		17
Semester IV		
BUS122	Basic Economics	3
OAD227	Administrative Procedures and Systems	3
OAD232	AIT Practicum	3
OAD106	Computer Applications Microsoft Access *(8 wks)*	1
COM121	Effective Speaking	3
ACC229	Computerized Accounting Applications	3
		16

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select from SOC121 or PSY121.
** Successful completion of OAD102, OAD104, OAD105, and OAD106 is equivalent to and may be substituted for BCA120.

Bold italicized courses indicate courses that contain content for Microsoft Office Specialist (MOS) certification.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

In order to keep pace with progress, the College reserves the right to change fees, academic programs, course descriptions, or any other statements, contained in this catalog at the discretion of the College or its Board of Trustees. Please refer to www.starkstate.edu for the most current information.

Administrative Information Technology

One-Year Certificate Program

Stark State College offers a one-year certificate program in administrative information technology for non-degree-seeking students. Students selecting the certificate program may apply credits earned in this one-year program to the associate degree program if they decide to pursue it. They will be awarded a certificate in administrative information technology upon completion of the courses listed.

Some of these courses may require prerequisite knowledge or skill. Refer to the course descriptions in the back of this catalog and/or check with the department chair of administrative information technologies.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
OAD121	Keyboarding/Formatting	3
OAD127	***Word Processing – Microsoft Word***	***3***
ENG124	College Composition †	3
	Social Sciences Elective*	3
BUS123	Business Mathematics	4
BCA120	Business Computer Applications**	4
		20
Semester II		
OAD236	***Database Applications – Microsoft Access***	***3***
ENG230	Business Communication	3
OAD226	***Spreadsheet - Microsoft Excel***	***3***
OAD131	Graphic Design Concepts	3
OAD132	Records Management	3
		15

35 TOTAL CREDIT HOURS

Students must complete an application upon completion of the courses in the certificate program. Applications may be obtained from the department chair of administrative information technologies.

† Based on SSCT placement score.
* May select from SOC121 or PSY121.
** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

Microsoft® Office Specialist Authorized Testing Center

Bold italicized courses indicate courses that contain content for Microsoft Office Specialist (MOS) certification.

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Automotive Technology

The service and repair of today's automobiles is and will continue to be very challenging. Because of technological advances and the quest for higher levels of customer service and satisfaction, today's automotive technician will need greater knowledge and competency levels than ever before.

During the last 20 years, there has been a rapid expansion in the use of electronics and microprocessor controls on automobiles. Today's automobiles can have up to 42 on-board computers and microprocessors that control engine management, emissions, occupant restraints, and on-board navigation systems. Along with their technical skills, today's technicians must also have good computer, communication and customer contact skills.

Stark State College's automotive technology program consists of four associate degree and seven certificate of completion options. The four associate degree options are: the comprehensive automotive technology program, the General Motors automotive service educational program (GM ASEP), the Toyota T-TEN program, and the Honda PACT program.

Non-degree seeking students may earn a certificate of completion in automotive technology by completing all of the technical courses included in the related associate degree program. The seven certificate of completion options are: the comprehensive automotive technology certificate of completion program, the comprehensive accelerated certificate of completion program, the Toyota T-TEN program, the Honda PACT program, the Caterpillar lift truck program, the ACDelco program, and the GM STC program.

Stark State's automotive technology curriculum blends classroom theory and hands-on training, thus giving the student the knowledge base and competencies they will need to process technical information, solve automotive problems and use diagnostics effectively. The program's low student-to-instructor ratio provides the student with the opportunity to actively participate in classroom and lab activities. Graduates of Stark State's automotive technology programs will be well prepared for a career as service technicians, dealership service advisors, service or parts managers, independent service facility operators, factory service representatives, insurance claims adjusters or lab test technicians. If students wish to pursue a bachelor degree after graduating from the program, they may transfer their Stark State credits to many well known four-year college and universities.

Stark State's automotive programs have been locally and nationally rated by the Industry Planning Council of the American Automobile Manufacturers Association (AAMA).

All of Stark State's automotive programs follow the guidelines required by the National Institute of Automotive Service Excellence (ASE) and are fully accredited by the National Automotive Technicians Education Foundation (NATEF). Many of Stark State's students pursue and pass ASE certification exams during the course of their instruction.

Graduates of Stark State's associate degree programs will receive an associate degree in applied science in automotive technology.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Automotive Technology

Comprehensive Automotive Program
Two-Year Degree

The Stark State College comprehensive automotive technology program is a two-year associate degree program designed for students seeking flexibility in their careers.

The curriculum is designed to provide the students with information about the service and repair of all of today's automobiles. Emphasis is placed on the three major domestic manufacturers (General Motors, Ford and Daimler Chrysler) and some foreign vehicles (Toyota, Honda, Isuzu, and Mazda, etc.).

The comprehensive automotive technology program includes all of the tasks from the nationally recognized NATEF task list, for all eight ASE specialty areas.

Students graduating from the comprehensive automotive program will receive an associate degree in applied science in automotive technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
AUT121	Automotive Technical Skills	2
AUT122	Automotive Systems and Engine Technology	4
AUT123	Engine Diagnosis and Major Service	4
ENG124	College Composition †	3
BUS123	Business Mathematics*	4
		17
Semester II		
AUT124	Vehicle Chassis Systems	4
AUT125	Automotive Electrical and Accessory Systems	4
AUT126	Automotive HVAC Systems	2
BUS121	Business Administration*	4
ACC121	Principles of Accounting I*	4
		18
Semester III		
AUT221	Fuel and Emissions Management Systems	3
AUT227	Computerized Vehicle Controls	3
AUT223	Advanced Automotive Electronics	3
AUT222	Engine Systems Performance Diagnosis	3
BUS122	Basic Economics	3
BCA120	Business Computer Applications*	4
		19
Semester IV		
AUT225	Automotive Drivetrains I	3
AUT226	Automotive Drivetrains II	3
AUT228	Automotive Service Management**	
	Technical Elective**	
AUT230	Technical Project**	2
ETD202	Independent Study**	
AUT233	Automotive Diagnostic Applications	2
AUT427	Alternative Fuels and Advanced Automotive Technologies	2
ENG221	Technical Report Writing	3
ACC130	Business Law and Ethics	3
		18

72 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Students planning to pursue a degree in engineering technology upon completion of an associate degree should substitute the following courses: ECA122, MTH123, MTH121, PHY121, and COM123 in place of or in addition to the above marked courses.

** Electives: Select from AUT228, AUT230, ETD202, Toyota T-TEN, Honda PACT, or CAT lift truck courses.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

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Automotive Technology

GM ASEP

The General Motors automotive service educational program (GM ASEP) is an associate degree automotive program. It is designed exclusively for use by GM dealers as a source for trained, skilled technicians.

The curriculum is designed to be GM-specific. The program requires that every student be an employee of a GM dealership. The program combines automotive technology courses, related courses, and a strong background in math, reading and electronics.

The GM ASEP curriculum includes all of the tasks from the nationally-recognized NATEF task list, for all eight ASE specialty areas, plus, the content of over 56 GM training courses.

Students graduating from GM ASEP will receive an associate degree in applied science in automotive technology. They will also receive training credit for over 56 GM training courses.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
AUT121	Automotive Technical Skills (GM ASEP)	2
AUT122	Automotive Systems and Engine Technology (GM ASEP)	4
AUT124	Vehicle Chassis Systems (GM ASEP)	4
ENG124	College Composition †	3
BUS123	Business Mathematics*	4
ETD222	Engineering Technology Co-op (GM ASEP)**	2
		19
Semester II		
AUT123	Engine Diagnosis and Major Service (GM ASEP)**	4
AUT125	Automotive Electrical and Accessory Systems (GM ASEP)	4
BUS121	Business Administration*	4
ACC121	Principles of Accounting I*	4
ETD222	Engineering Technology Co-op (GM ASEP)**	2
		18
Summer Semester		
AUT126	Automotive HVAC Systems (GM ASEP)	2
ETD222	Engineering Technology Co-op (GM ASEP)**	2
		4
Semester III		
AUT221	Fuel and Emission Management Systems (GM ASEP)	3
AUT225	Automotive Drivetrains I (GM ASEP)	3
AUT226	Automotive Drivetrains II (GM ASEP)	3
BCA120	Business Computer Applications*	4
ETD222	Engineering Technology Co-op (GM ASEP)**	2
		15
Semester IV		
ACC130	Business Law and Ethics	3
ENG221	Technical Report Writing	3
AUT222	Engine Systems Performance Diagnosis (GM ASEP)	3
AUT223	Advanced Automotive Electronics (GM ASEP)	3
AUT227	Computerized Vehicle Controls (GM ASEP)	3
ETD222	Engineering Technology Co-op (GM ASEP)**	2
	Technical Elective***	
		17

73 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Students planning to pursue a degree in engineering technology upon completion of an associate degree should substitute the following courses: ECA122, MTH123, MTH121, PHY121, and COM123 in place of or in addition to the above marked courses.

** Students enrolling in ETD222 must have approval of the automotive technology programs coordinator or the department chair of the automotive technology program.

*** Electives: In place of or in addition to ETD222 students may take GM STC or ACDelco courses as electives.

GM ASEP

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Automotive Technology

A COLLEGE TECH PREP PARTICIPANT

Comprehensive One-Year Accelerated Certificate of Completion Program

The Stark State College comprehensive accelerated certificate of completion program (CACCP) is a one-year program that contains only the automotive courses listed in the two-year comprehensive automotive program.

The curriculum is designed to be an intensive one-year education in the service and repair of today's automobiles. As in the comprehensive automotive program, emphasis is placed on the three major domestic manufacturers (General Motors, Ford and Daimler Chrysler) and some foreign vehicles (Toyota, Honda, Isuzu, and Mazda, etc.).

The CACCP curriculum is a blend of classroom theory and hands-on lab assignments that follow NATEF guidelines. This allows the student to pursue ASE certification.

Students successfully completing the CACCP curriculum will receive a comprehensive accelerated certificate of completion from Stark State College.

Students desiring to obtain an associate degree in applied science in automotive technology can chose to add the academic courses that are listed in the two-year comprehensive automotive program.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
AUT121	Automotive Technical Skills	2
AUT122	Automotive Systems and Engine Technology	4
AUT124	Vehicle Chassis Systems	6
AUT125	Automotive Electrical and Accessory Systems	4
ETD224	Engineering Technology Co-op*	4
		20
Semester II		
AUT123	Engine Diagnosis and Major Service	4
AUT126	Automotive HVAC	2
AUT221	Fuel Emission Management Systems	3
AUT223	Advanced Automotive Electronics	3
AUT227	Computerized Vehicle Controls	3
ETD224	Engineering Technology Co-op*	4
		19
Semester III		
AUT222	Engine System Performance Diagnosis	3
AUT225	Automotive Drivetrains I	3
AUT226	Automotive Drivetrains II	3
AUT233	Automotive Diagnostics Applications	2
ETD224	Engineering Technology Co-op*	4
		15

54 TOTAL CREDIT HOURS

* ETD224 Engineering Technical Co-op is an elective course which should be taken by Toyota/Lexus or Honda/Acura employees only.

Comprehensive Automotive Program Two-Year Certificate of Completion

The Stark State College comprehensive automotive technology certificate of completion program is a two-year program that includes only the automotive classes that are in the two-year associate degree program.

The curriculum is designed to provide the student with information about the service and repair of all of today's automobiles. Emphasis is placed on the three major domestic manufacturers (General Motors, Ford and Daimler Chrysler) and some foreign vehicles (Toyota, Honda, Isuzu, and Mazda, etc.).

The comprehensive automotive technology certificate of completion program includes all of the tasks from the nationally recognized NATEF task list, for all eight ASE specialty areas.

Students graduating from the comprehensive automotive technology certificate of completion program will receive a comprehensive automotive technology certificate of completion.

Students desiring to obtain an associate degree in applied science in automotive technology must complete the additional academic courses that are listed in the two-year associate degree comprehensive automotive program.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
AUT121	Automotive Technical Skills	2
AUT122	Automotive Systems and Engine Technology	4
AUT123	Engine Diagnosis and Major Service	4
		10
Semester II		
AUT124	Vehicle Chassis Systems	4
AUT125	Automotive Electrical and Accessory Systems	4
AUT126	Automotive HVAC Systems	2
		10
Semester III		
AUT221	Fuel and Emissions Management Systems	3
AUT227	Computerized Vehicle Controls	3
AUT223	Advanced Automotive Electronics	3
AUT222	Engine Systems Performance Diagnosis	3
		12
Semester IV		
AUT225	Automotive Drivetrains I	3
AUT226	Automotive Drivetrains II	3
AUT233	Automotive Diagnostic Applications	2
AUT427	Alternative Fuels and Advanced Automotive Technologies	2
		10

42 TOTAL CREDIT HOURS

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Automotive Technology

Honda PACT Certificate of Completion

The Honda professional automotive career training (PACT) program can be pursued as a certificate of completion or as an associate degree. Stark State's Honda PACT option is an integral part of the comprehensive automotive technology program. Students selecting the Honda PACT option begin by enrolling in the comprehensive automotive technology program and select either a certificate of completion option or an associate degree path. As the student successfully completes the related technical courses in the comprehensive program, they will concurrently take the Honda modules.

The Honda PACT program is designed exclusively for the student who is seeking a career as a service technician at a Honda/Acura dealership. The Honda PACT curriculum is produced by American Honda Motor Company, Inc. It prepares the student for a career with Honda by providing Honda's core certification courses that are needed for advancement at a Honda/Acura dealership.

The Honda PACT curriculum is a blend of classroom theory and hands-on lab assignments. The curriculum follows both the ASE and NATEF guidelines. This allows the student to pursue ASE certification.

Since students will be on a one-year or two-year path, the sequence of Honda classes may vary from one semester to the next based on the individual students needs. Honda PACT classes are scheduled to run on selected Fridays throughout each semester, including the summer, and are a full day in length.

SUGGESTED COURSE SEQUENCE

		Credit Hours
AUT171	Intro to Honda PACT Program	1
AUT172	Honda Automotive Engine Mechanical	2
AUT173	Honda Steering and Suspension Systems	1
AUT174	Honda Braking Systems	1
AUT175	Honda Electrical Systems	2
AUT176	Honda Air Conditioning Systems	1
AUT277	Honda Computerized Engine Controls	2
AUT271	Honda Fuel and Emission Systems	1
AUT275	Honda Manual Transmissions	1
AUT276	Honda Automatic Transmissions	1
AUT273	Honda Advanced Diagnostic Applications	1
ETD224	Engineering Technology Co-op*	4

18 TOTAL CREDIT HOURS

A COLLEGE TECH PREP PARTICIPANT

Toyota T-TEN One-Year Certificate of Completion

The T-TEN program is designed exclusively for the student who is seeking a career as a service technician at a Toyota dealership. The T-TEN curriculum is produced by the University of Toyota. It prepares the student for a career with Toyota by providing Toyota's core certification courses that are needed for advancement at a Toyota dealership.

The Toyota technical education network (T-TEN) program can be pursued as a one-year certificate of completion or as an associate degree. Stark State's T-TEN option is an integral part of the comprehensive automotive technology program. Students selecting the T-TEN option begin by enrolling in the comprehensive automotive technology program and select either a certificate of completion option or an associate degree path. **As the student successfully completes the related technical courses in the comprehensive program, they will concurrently take the Toyota T-TEN modules. These courses may be taken as technical electives in the comprehensive automotive technology program.**

The T-TEN curriculum is a blend of classroom theory and hands-on lab assignments. The curriculum follows both the ASE and NATEF guidelines. This allows the student to pursue ASE certification.

Since students will be on a one-year or two-year path, the sequence of Toyota classes may vary from one semester to the next based on the individual student's needs. Toyota classes are scheduled to run on selected Fridays throughout each semester, including the summer, and are a full day in length.

SUGGESTED COURSE SEQUENCE

		Credit Hours
AUT141	Toyota Under-car Systems (Two Toyota Certifications)	2
AUT142	Toyota Electrical Systems (Two Toyota Certifications)	2
AUT143	Toyota Air Conditioning Systems (One Toyota Certification)	1
AUT 251	Toyota Manual Transmissions (One Toyota Certification)	1
AUT252	Toyota Automatic Transmissions (One Toyota Certification)	1
AUT253	Toyota Engine Control Systems (One Toyota Certification)	2
		9

9 TOTAL CREDIT HOURS

A COLLEGE TECH PREP PARTICIPANT

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Automotive Technology

ACDelco Certificate of Completion

The ACDelco courses listed below are exclusively for technicians working in ACDelco TSS shops. Classes will be scheduled based on demand and student enrollment will be on the day of the class. These courses will use ACDelco curriculum designed to meet the exact training requirements of the ACDelco TSS program.

SUGGESTED COURSE SEQUENCE

		Credit Hours
AUT321	ACDelco HVAC System Diagnostics	1
AUT322	ACDelco Duramax 6600 Diesel Engine Performance	1
AUT323	ACDelco Braking Systems	1
AUT324	ACDelco GM OBD-II Diagnostics	1
AUT325	ACDelco Chrysler OBD-II EEC Diagnostics	1
AUT326	ACDelco Ford OBD-II EEC Diagnostics	1
AUT327	ACDelco Honda Emissions and Driveability	1
AUT328	ACDelco Engine Performance	1
AUT329	ACDelco Body Controls and Communication Systems	1
AUT330	ACDelco GM Supplemental Restraints	1
AUT331	ACDelco Battery, Starting, and Charging Systems	1
AUT332	ACDelco Vibration Control Diagnosis	1

12 TOTAL CREDIT HOURS

CAT Lift Truck Certificate of Completion

The CLT Program can be pursued as a certificate of completion or as an associate degree. Stark State's CLT option is an integral part of the Comprehensive Automotive Technology Program. Students selecting the CLT option begin by enrolling in the Comprehensive Automotive Technology Program and select either a certificate of completion option or an associate degree path. As the student successfully completes the related technical courses in the Comprehensive Program, they will concurrently take the Caterpillar modules.

The CAT program is designed exclusively for the student who is seeking a career as a service technician at a Caterpillar Lift Truck dealership. The CAT curriculum is produced by MCFA. It prepares the student for a career as a Caterpillar Lift Truck Technician by providing CAT's core certification courses that are needed for advancement at a CAT Lift Truck dealership.

The CAT curriculum is a blend of classroom theory and hands-on lab assignments. The curriculum follows OSHA and Industrial Truck Association (ITA) guidelines.

Since students will be on a one-year or two-year path, the sequence of CAT classes may vary from one semester to the next based on the individual students needs. CAT classes are scheduled to run on selected Fridays throughout each semester, including the summer, and are a full day in length.

SUGGESTED COURSE SEQUENCE

		Credit Hours
AUT181	Introduction to CAT Lift Trucks	1
AUT182	CAT Operator Safety Training	1
AUT183	CAT Service Information Systems and Planned Maintenance	1
AUT184	CAT Hydraulic Systems	1
AUT185	CAT Internal Combustion (IC) Engines	2
AUT186	CAT Masts and Lift Mechanisms	1
AUT187	CAT Electrical Systems	3
AUT188	CAT Steering Systems	1
AUT189	CAT Braking Systems	1
AUT281	CAT Differentials and Front Axles	1
AUT282	CAT Transmissions	2
AUT283	CAT Fuel Systems (LP, Gasoline)	2
AIT130	Structural Maintenance Welding	3
ETD224	CAT Engineering Technology Co-op	4

24 TOTAL CREDIT HOURS

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Automotive Technology

GM STC Certificate of Completion

The GM STC courses are modular courses. The information contained in each modularized class is an integral part of one of the courses in the comprehensive automotive technology program or the GM ASEP program. These courses can be taken as electives by students enrolled in the comprehensive automotive technology program. **However, students must have permission from the GM STC instructor, automotive programs coordinator, or automotive department chair.** Students that elect to take the GM STC modular courses without taking the comprehensive classes can receive credit for selected classes within the comprehensive automotive technology program upon completion of all of the modules related to a given class.

The GM STC modular courses are designed for students who are seeking a career as General Motors service technicians. The curriculum is produced as a joint effort between Stark State College and General Motors. The curriculum includes: computer based training, interactive distance learning, classroom theory, and hands-on lab assignments.

Upon completion of all of the GM STC modular courses, the student will achieve recognition as a GM world class technician if they are employed by a GM dealership.

SUGGESTED COURSE SEQUENCE

		Credit Hours
AUT144	Electrical/Electronics Terminals and Connectors	1
AUT145	Advanced HVAC Diagnostics	1
AUT146	Electronic Suspension Systems	1
AUT147	Foundation Brakes/ABS Systems Service	1
AUT148	Engine Mechanical Diagnosis and Measurement	2
AUT241	Body Control Systems	2
AUT242	Entertainment Systems	2
AUT243	GM Air Bag Systems	1
AUT244	Allison LCT 1000 Automatic Transmission Diagnosis and Repair	2
AUT245	Vibration Correction	1
AUT246	Rear Axle & Propeller Shaft	2
AUT247	Vehicle Emissions, Enhanced Testing, and Diagnostics	1
AUT248	GM Powertrain Performance	2
AUT249	Diesel Engine Performance 2001	2
AUT250	Automotive Transmission/Transaxle Diagnostics	2
AUT421	GM Waterleak and Wind Noise Management	1
AUT422	GM Diesel Engine Performance Certification Assessment	1
AUT423	GM Manual Drivetrain and Axle Certification Assessment	1
AUT424	GM HVAC Certification Assessment	1
AUT425	GM Engine Performance Certification Assessment	1
AUT426	GM Automatic Transmission – Transaxle Diagnostics Certification Assessment	1
AUT428	GM Engine Repair Certification Assessment	1
AUT429	Electrical/Electronics Certification Assessment	2
AUT430	GM Steering and Suspension Certification Assessment	1
AUT431	GM Brakes Certification Assessment	1

34 TOTAL CREDIT HOURS

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Business Management Technology

The importance of effective management cannot be overstated. In any successful business or government, the skills of good managers are essential to that success. The ability to survive, grow and profit starts with the manager's ability to envision how a business can satisfy marketplace needs. In today's business world, companies are looking for managers who understand technology, can adapt quickly to change, skillfully motivate subordinates, and realize the importance of satisfying customers.

Students who successfully complete this program will be able to formulate goals and strategies to analyze the internal and external environment of business; describe and analyze patterns of organizational behavior within contemporary organizations and apply human relations skills to job situations; identify contemporary approaches to motivation and describe a variety of methods used to create and maintain a positive work environment; describe how personal and organizational values influence managers and their roles; and demonstrate and apply communications skills and quantitative methods.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT221	Supervision	3
BUS221	Microeconomics	3
MGT227	Operations Management	4
ACC133	Managerial Accounting	4
	Technical Elective	3
		17
Semester IV		
MGT224	Human Resources Management	3
BUS222	Macroeconomics	3
MGT223	Business Decision-Making	4
SOC121	Sociology	3
ACC130	Business Law and Ethics	3
	Technical Elective	3
		19

70 TOTAL CREDIT HOURS

TECHNICAL ELECTIVES

FIN220	Principles of Finance
MGT222	Small Business Management
MGT 232	International Business
MKT226	Supply Chain Management

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Business Management Technology

Business @ A Distance – Online Option

What is the Consortium?

The Business @ a Distance Consortium is a collaboration of several Ohio two-year colleges cooperating to deliver Web-based business course options to Stark State's associate of applied business degree in business management technology. Member colleges deliver online specialty courses, not offered at Stark State, that transfer into and count toward Stark State College degree requirements.

How does it work?

The student registers for the business management program at Stark State and takes the majority of their course requirements just as they would as a traditional student. During the last two semesters of the sophomore year, the student selects an available group of three to four courses from one of the Consortium members. The student applies for admission to the member college and takes the selected courses online. Once the courses are completed, the student requests that a transcript be sent to Stark State. The online courses are transferred to Stark State and the student is awarded the A.A.B. degree in business management with specialization in the chosen area.

Which colleges are members of the Consortium?

- Belmont Technical College
- Edison Community College
- James A. Rhodes State College
- Lakeland Community College
- Lorain Community College
- Marion Technical College
- Northwest State Community College
- Stark State College of Technology
- Terra Community College
- Washington State Community College

What consortium program options are currently available online that are not available at Stark State?

- Human Resource Management
- Tax Administration
- Industrial Supervision

More courses/programs are coming online each semester.

How do I start?

Contact management and marketing department chair at 330-966-5453.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Business Management Technology

Entrepreneurship Option

The small business sector is one of the fastest growing in the nation's economy.

This entrepreneurship option helps entrepreneurs launch new ventures, as well as helping existing entrepreneurs strengthen their managerial and business skills to grow their businesses.

Students will learn the fundamentals of starting and operating their own a business. This program includes basic business skills as well as specific courses in starting and managing and entrepreneurial business. Course work covers evaluating a business opportunity, preparing a business plan, obtaining funding, planning advertising and sales promotions; marketing a product or service; developing an accounting system and financial management.

Graduates from this program will have a clear understanding of the personal characteristics needed to be successful as an entrepreneur. The will be able to analyze and interpret data, communicate orally and in writing. They can direct activities and staff and make sound decisions. They will be able to think critically and to supervise employees. These skills are in addition to the previously mentioned outcomes for students in business management technology.

SUGGESTED COURSE SEQUENCE

Semester I		Credit Hours
ENT120	Entrepreneurship	2
BCA120	Business Computer Applications*	4
BUS123	Business Math	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		16
ENT121	Entrepreneurial Marketing	3
MGT121	Principles of Management	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
ENT221	Entrepreneurial Finance	3
MGT221	Supervision	3
BUS221	Microeconomics	3
ENT222	New Venture Creation	2
ACC133	Managerial Accounting	4
MGT227	Operations Management	4
		19
MGT224	Human Resource Management	3
MGT223	Business Decision Making	4
BUS222	Macroeconomics	3
ENT223	Entrepreneurship Practicum	2
ACC130	Business Law and Ethics	3
SOC121	Sociology	3
		18

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Business Management Technology

Finance Option

A company's managers must ensure that it has enough money to perform it's tasks successfully, in both the present and the future. Adequate funds must be available to buy materials and equipment, pay bills, purchase additional facilities and compensate employees. Finance is the planning, obtaining and managing of the company's funds in order to accomplish its objectives efficiently and effectively.

The goal is that graduates of this option will be able to understand a financial plan and be able to demonstrate a working knowledge of the various investment markets, along with having a foundation for working with the basic principles of taxation. These skills are in addition to the previously mentioned outcomes for students in the business management technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT221	Supervision	3
BUS221	Microeconomics	3
ACC124	Individual Taxation	4
ACC133	Managerial Accounting	4
FIN221	Investments and Securities	4
		18
Semester IV		
MGT224	Human Resource Management	3
BUS222	Macroeconomics	3
MGT223	Business Decision-Making	4
SOC121	Sociology	3
ACC130	Business Law and Ethics	3
FIN220	Principles of Finance	4
		20

72 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Business Management Technology

Health Services Option

One of the fastest changing fields in the U.S. today is healthcare with its many HMOs, PPOs and other health service providers. This option is designed to blend our basic management program with a basic knowledge of the healthcare industry, anatomy, insurance, physiology, and medical terminology. This program is designed for the health service person who handles insurance claims after they leave the doctor's office.

The goal is that graduates in this option will demonstrate a working knowledge of claims processing and the health care industry, and be able to communicate using appropriate medical terminology. These skills are in addition to the previously mentioned outcomes for students in business management technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
BIO125	Medical Terminology	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT221	Supervision	3
BUS221	Microeconomics	3
BIO101	Introduction to Anatomy and Physiology	3
COM121	Effective Speaking	3
ACC133	Managerial Accounting	4
HIT230	Healthcare Delivery in the United States	2
		18
Semester IV		
MGT224	Human Resource Management	3
BUS222	Macroeconomics	3
MGT223	Business Decision-Making	4
SOC121	Sociology	3
ACC130	Business Law and Ethics	3
MAT231	Reimbursement for Healthcare Services	3
		19

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Business Management Technology

International Business Option

Few changes in the last ten years have had more impact on business than globalization, and this trend will continue in this new millennium. More and more U.S. companies are becoming aware that the way to expand and remain competitive is to enter the global marketplace. Coupled with continually advancing communications technology and the expansion opportunities abroad, global business will continue to grow as rapidly, if not more so, than in the past.

There will be more rapid shifts in the marketplace and less acceptance of imbalances. Trade will increase with former Eastern Bloc countries as they open up their economies to foreign trade and investment.

Graduates of this option will be able to demonstrate a working knowledge of global activities such as exchange rates, the world economy, banking, imports and exports, international law, and will understand the complexities that are prevalent in cultural diversity. These skills are in addition to the previously mentioned outcomes for students in business management technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT221	Supervision	3
BUS221	Microeconomics	3
MGT232	International Business	3
ACC130	Business Law and Ethics	3
ACC133	Managerial Accounting	4
		16
Semester IV		
BUS223	International Economics	3
BUS222	Macroeconomics	3
ACC134	International Law	3
SOC225	Cultural Diversity	3
MGT223	Business Decision-Making	4
MGT224	Human Resource Management	3
		19

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Business Management Technology

KSU Stark BBA Degree Option

The importance of well-educated individuals in business cannot be overstated. The more education a manager obtains, the better chances for advancement. Stark State College recognizes the value of education beyond the associate degree and has teamed up with Kent State University Stark Campus to provide seamless transition into their business program. Stark State students can complete this special option in business management technology and receive an associate degree, take an additional 12 credit hours of courses at Stark State, then transfer to KSU Stark with a total of 83 semester credit hours toward KSU Stark's business administration program. An additional 45 semester credit hours of degree requirements are needed through Kent State Stark to earn a BBA degree.

Students who successfully complete the Stark State program will be able to organize multiple business operations and make decisions using a team-based approach. They will demonstrate the ability to effectively communicate ideas and concepts in a professional format. They can analyze and incorporate elements from internal and external environments for goal and strategy development. They will be able to demonstrate the ability to effectively manage, motivate, and delegate resources in an ever changing business environment. They can show the ability to utilize and analyze quantitative measures effectively.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications	4
MTH121	College Algebra and Trigonometry I	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
MTH222	Statistics	3
ENG224	Composition and Literature	3
ACC132	Financial Accounting	4
		16
Semester II		
MGT221	Supervision	3
BUS221	Microeconomics	3
MGT227	Operations Management	4
ACC133	Managerial Accounting	4
PSY121	General Psychology	3
		17
Semester IV		
MGT224	Human Resource Management	3
BUS222	Macroeconomics	3
MGT223	Business Decision-Making	4
SOC121	Sociology	3
ACC130	Business Law and Ethics	3
ACC223	Cost Accounting	4
		20

71 TOTAL CREDIT HOURS NEEDED FOR AAB DEGREE

† Based on SSCT placement score.

Additional Courses (12 total credit hours)		**Credit Hours**
PHL122	Ethics	3
MTH221	Concepts of Calculus	3
	Two Basic Science Courses (Transfer Module) *(3 credit hour minimum must involve lab class; select from BIO101 or BIO126, CHM101 or CHM121, PHY101 or PHY121)*	6 (min)

Additional 45 credit hours must be taken at Kent State University to obtain BBA degree.

KENT STATE UNIVERSITY STARK

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Business Management Technology

Small Business Option

Of the 25.5 million businesses in the United States today, approximately 25.1 million, or 98.5 percent, can be considered "small" (employing less than 100 people). Small companies employ 52 percent of the nation's private sector workforce. The Small Business Administration estimates that small companies create more than 75.8 percent of the nation's net new jobs.

Small businesses make tremendous contributions to our economy. They produce 51 percent of the country's private sector gross domestic product and account for 47 percent of business sales.

Even if students don't start their own businesses, they will probably work for a small business at some point in their careers.

The goal is that graduates of this option will be able to develop a business plan and will understand the complexities of renting versus owning property and equipment. Entrepreneurial spirit will be enhanced. These skills are in addition to the previously mentioned outcomes for students in the business management technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT221	Supervision	3
BUS221	Microeconomics	3
ACC130	Business Law and Ethics	3
ACC133	Managerial Accounting	4
MKT221	Sales	3
		16
Semester IV		
MGT224	Human Resource Management	3
BUS222	Macroeconomics	3
MGT223	Business Decision-Making	4
SOC121	Sociology	3
MGT222	Small Business Management	3
MKT226	Supply Chain Management	3
		19

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Business Management Technology

Tri-State University Transfer Option

This option is a 2+2 degree completion program developed for students who wish to further their education in a golf-related field by obtaining their bachelor's degree from Tri-State University in Angola, IN.

This associate degree program in business management technology transfers completely into Tri-State's school of business where the student can complete a bachelor's of science degree in management or marketing with a specialization in the golf industry.

The bachelor's of science degree includes courses on such industry based topics as golf club design, repair, fitting, turf maintenance, pro-shop management, and golf swing instruction.

This two year associate degree program provides graduates with the same competencies as the regular business management degree program with more emphasis on mathematics to better prepare the student for transfer to Tri-State University.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
MTH121	College Algebra and Trigonometry I	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
MTH222	Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT221	Supervision	3
BUS221	Microeconomics	3
MGT227	Operations Management	4
ACC133	Managerial Accounting	4
CAP125	Advanced Microsoft Applications	3
		17
Semester IV		
MGT224	Human Resource Management	3
BUS222	Macroeconomics	3
MGT223	Business Decision-Making	4
PSY121	General Psychology	3
ACC130	Business Law and Ethics	3
MGT232	International Business	3
		19

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

TSU
TRI-STATE UNIVERSITY
A PRIVATE UNIVERSITY FOUNDED IN 1884

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Financial Services Technology

The financial services curriculum provides training in *all* aspects of the financial planning process. This includes specialized training in credit, insurance, investments, retirement planning, employee benefits, and estate and income tax planning.

Providing personal financial services requires a competence and style similar to that of other professional consulting businesses. The advisor must be familiar with relevant strategies and products and must be able to evaluate each client's situation and unique requirements to recommend a suitable course of action. Financial products include insurance, loans, stocks and mutual funds, bonds and other interest-earning investments, real estate and retirement plans. The financial services professional must be aware of the advantages and shortcomings of the various financial products that a client may consider. Personal financial planning applies to all income levels; not just the wealthy.

The goal of this program is to provide graduates with all the tools and skills necessary to be successful in the undertaking of a career in the financial services field of their choosing. All the technical knowledge required to begin a career in financial services is provided and its application in real world situations is practiced extensively. The curriculum covers all of the knowledge base tested on the Certified Financial Planner examination. Students will be expected to demonstrate their acquired knowledge and abilities as they progress in the program and during the capstone Financial Services and Cases Practices course.

The current business environment requires all prospective employees to have good communication skills, both written and oral, and to be able to interact with co-workers and clients in a professional manner. Employers expect their workers to have strong computational skills, to be computer literate, and to be able to think critically. All students completing a financial services program at Stark State will be introduced to, and provided practice in, these basic competencies, which they are expected to master.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BUS123	Business Mathematics	4
BUS121	Business Administration	4
ACC132	Financial Accounting*	4
ACC127	Quantitative Business Statistics	3
		18
Semester II		
ENG230	Business Communication	3
BCA120	Business Computer Applications***	4
BUS221	Microeconomics	3
MKT121	Principles of Marketing	3
FIN123	Fundamentals of Financial Services	4
		17
Semester III		
COM121	Effective Speaking	3
ACC124	Individual Taxation	4
FIN221	Investments and Securities	4
MKT221	Sales	3
FIN224	Risk Management	3
		17
Semester IV		
FIN223	Estate and Income Tax Planning	3
FIN222	Retirement Planning and Employee Benefits	3
FIN225	Financial Services Cases and Practices	3
FIN226	Current Financial Service Topics I	3
ACC130	Business Law and Ethics	3
	Social Sciences Elective**	3
		18

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select from ACC121 or ACC122 in place of this course.
** Student may select from PSY121, PSY124, SOC121, SOC122 or SOC225.
*** Successful completion of OAD102, OAD104, OAD105, and OAD106 is equivalent to and may be substituted for BCA120.

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Information Reporting Technology

Broadcast Captioning Option

The broadcast captioning option in the information reporting technology program is the outgrowth of the court reporting field and is a highly developed skill that is used to translate spoken communication into visual communication. A stenotype machine is connected to a state-of-the-art computer with special closed-captioning software that allows the writer to caption the spoken word in various TV/news programs, classrooms, conventions, and conferences. A broadcast captioner can assist millions of deaf and hard-of-hearing persons by captioning television and news programs. VITAC Corporation, a leading captioning company nationwide, partners with Stark State to provide the software, educational, and technical support. Stark State is a training site for VITAC Corporation, for transitional reporters seeking a career change to captioning.

The information reporting technologies program offers distance learning opportunities through Web-based education. Virtually anyone who has access to a computer will be able to take the program online, but the student will be required to have a computerized steno machine and specific reporting software before taking distance learning courses.

Stark State also offers a certificate of competency in broadcast captioning for working reporters interested in transitioning into broadcast captioning.

The goal is that graduates will demonstrate the use of good grammar, punctuation and editing skills for transcription preparation and production; conduct research and realtime writing dictionary maintenance for broadcast reporting; communicate clearly and concisely; utilize all information reporting technology; exemplify a high standard of ethics as an information reporting professional; and demonstrate employability skills and characteristics as an information reporting professional.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BCA120	Business Computer Applications**	4
OAD130	Communication and Transcription Skills	3
IRT121	Realtime Theory I	4
	Social Sciences Elective*	3
		17
Semester II		
BUS123	Business Mathematics	4
BIO101	Introduction to Anatomy and Physiology	3
	Non-technical Track Elective***	3
IRT122	Realtime Theory II	4
IRT229	Realtime Software Applications *(8 wks)*	1
IRT132	Realtime Writing I *(8 wks)*	1
		16
Summer I		
IRT129	Speed Building I	4
IRT236	Advanced Theory Principles	3
		7
Semester III		
ENG230	Business Communication	3
IRT230	Basic Broadcast Captioning	3
IRT130	Speed Building II	4
BUS121	Business Administration	4
	IRT Technical Track Elective****	3
IRT237	Realtime Writing II *(8 wks)*	1
		18
Semester IV		
ACC130	Business Law and Ethics	3
IRT235	Advanced Broadcast Captioning	3
IRT123	Speedbuilding III	4
IRT232	Information Reporting Internship	2
IRT239	Realtime Writing III *(8 wks)*	1
IRT238	Realtime Writing IV *(8 wks)*	1
		14

72 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select from SOC121 or PSY121.
** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
*** Student may select from PSC121, COM121, BUS222 or BIO125.
**** Students may select from IRT131, BIO127, CHM101, PSC121.

Students are required to purchase a computerized stenograph machine and court reporting student realtime software prior to beginning this program.

Graduation requirements for broadcast captioning option

One 5-minute machine shorthand test of literary at 180 wpm must be passed with 96% accuracy before writing a 30-minute broadcast news program with a TER (Total Error Rates) goal of 98% accuracy or higher based on total word count.

NCRA Guardians of the Record Approved Program

VITAC® A WORDWAVE COMPANY

FRANKLIN UNIVERSITY

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Information Reporting Technology

Judicial Reporting Option

Reporting has joined the ranks of the information technologies professions because computers are an integral part of information reporting. Information reporters are using their knowledge and skill to serve as information managers in complicated trials. Freelance reporters now have the ability to capture their deposition in digital format.

The information reporting technologies program offers distance learning opportunities through Web-based education. Virtually anyone who has access to a computer will be able to take the program online, but the student will be required to have a computerized steno machine and specific reporting software before taking distance learning courses.

The goal is that graduates will demonstrate the use of good grammar, punctuation and editing skills for transcription preparation and production; conduct research and realtime writing dictionary maintenance for judicial reporting; communicate clearly and concisely; utilize all information reporting technology; exemplify a high standard of ethics as an information reporting professional and demonstrate employability skills and characteristics as an information reporting professional.

Graduation requirements for judicial reporting option
Three 5-minute machine shorthand tests of literary at 180 wpm, jury charge at 200 wpm and courtroom testimony material at 225 wpm must be passed with a minimum of 95% accuracy; must transcribe a simulated RPR skills test at RPR speed levels in 3.5 hours; and must write a simulated CRR skills test at a speed of 180-200 wpm literary for 5 minutes.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BCA120	Business Computer Applications**	4
OAD130	Communication and Transcription Skills	3
IRT121	Realtime Theory I	4
	Social Sciences Elective*	3
		17
Semester II		
BUS123	Business Mathematics	4
BIO101	Introduction to Anatomy and Physiology	3
IRT131	Legal Terminology	3
IRT122	Realtime Theory II	4
IRT229	Realtime Software Applications *(8 wks)*	1
IRT132	Realtime Writing I *(8 wks)*	1
		16
Summer		
IRT129	Speed Building I	4
IRT236	Advanced Theory Principles	3
		7
Semester III		
ENG230	Business Communication	3
IRT231	Judicial Procedures	3
IRT130	Speed Building II	4
BUS121	Business Administration	4
	Non-technical Track Elective***	3
IRT237	Realtime Writing II *(8 wks)*	1
		18
Semester IV		
ACC130	Business Law and Ethics	3
	IRT Technical Track Elective****	3
IRT123	Speed Building III	4
IRT232	Information Report Internship	2
IRT239	Realtime Writing III *(8 wks)*	1
IRT238	Realtime Writing IV *(8 wks)*	1
		14

72 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select from SOC121 or PSY121.
** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.
*** Student may select from PSC121, COM121, BUS222 or BIO125.
**** Students may select from IRT230, BIO125, PSC121.

Students are required to purchase a computerized stenograph machine and court reporting student realtime software prior to beginning this program.

NCRA Guidelines of the Record Approved Program

VITAC® A WORDWAVE COMPANY

FRANKLIN UNIVERSITY

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Information Reporting Technology

Realtime Transcription Option

Realtime transcriptionists who develop the ability to use the shorthand machine as the input device for text entry are availing themselves of a multitude of job opportunities. In the "Information Age," companies are searching for staff that can input text at high accurate rates of speed. These companies are looking nationwide for well-trained information reporters who have good vocabulary, excellent English skills, good transcription skills, and the ability to turn their work around quickly.

The realtime transcription option provides training to students on how to use the shorthand machine as an input device in lieu of the QWERTY keyboard and, therefore, produce text at lightning fast speeds. The steno strokes are translated as they are written, using a stored dictionary, and the resulting English text is input directly into the selected PC application. Not only can the reporters write text, they can also use steno strokes to send commands to the operating system or the application. The reporter can conduct all word processing functions from the shorthand machine and produce the document in a timely fashion without ever touching the keyboard or the mouse.

The information reporting technologies program offers distance learning opportunities through Web-based education.

The goal is that graduates will demonstrate the use of good grammar, punctuation and editing skills for transcription preparation and production; conduct research; communicate clearly and concisely; utilize all information reporting technology; exemplify a high standard of ethics as an information reporting professional and demonstrate employability skills and characteristics as an information reporting professional.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
BCA120	Business Computer Applications**	4
OAD130	Communication and Transcription Skills	3
IRT121	Realtime Theory I	4
		14
Semester II		
BUS123	Business Mathematics	4
BIO101	Introduction to Anatomy and Physiology	3
	Non-technical Track Elective***	3
IRT122	Realtime Theory II	4
IRT229	Realtime Software Applications *(8 wks)*	1
IRT132	Realtime Writing I *(8 wks)*	1
		16
Summer		
IRT129	Speed Building I	4
IRT236	Advanced Theory Principles	3
		7
Semester III		
ENG230	Business Communication	3
	IRT Technical Track Elective****	3
IRT130	Speed Building II	4
BUS121	Business Administration	4
IRT237	Realtime Writing II *(8 wks)*	1
		15
Semester IV		
ACC130	Business Law and Ethics	3
	IRT Technical Track Elective****	3
	IRT Technical Track Elective****	3/4
IRT239	Realtime Writing III *(8 wks)*	1
IRT238	Realtime Writing IV *(8 wks)*	1
	Social Sciences Elective*	3
		14/15

66/67 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select from SOC121 or PSY121.
** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA20.
*** Student may select from PSC121, COM121, BUS222 or BIO125.
**** Students may select from IRT123, IRT131, IRT230, IRT231, IRT235, OAD239, MTC121, BIO123, BIO124.

Students are required to purchase a computerized stenograph machine and court reporting student realtime software prior to beginning this program.

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Information Reporting Technology

Scopist Option

Scopists are hired by court reporters to edit and proofread transcripts while the reporters work in court or take depositions and, according to the National Court Reporters Association (NCRA), there are an estimated 50,000 court reporters in the United States. Scoping is an ideal career for a person who prefers to work at home and provides flexibility in choosing how many hours you want to work.

The job of the scopist is to edit the stenograph-to-English translation of the trial proceeding recorded by the reporter and check for any mistranslations in order to correct words, such as proper names and any technical terms. A scopist uses specialized reporting software to review, edit and proofread the court transcript that can easily be transferred via online services.

The information reporting technologies program offers distance learning opportunities through Web-based education.

The goal is that graduates will demonstrate the use of good grammar, punctuation and editing skills for transcription preparation and production; conduct research; communicate clearly and concisely; utilize all information reporting technology; exemplify a high standard of ethics as an information reporting professional and demonstrate employability skills and characteristics as an information reporting professional.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
IRT131	Legal Terminology	3
OAD130	Communication and Transcription Skills	3
IRT133	Theory for Scopists	4
OAD121	Keyboarding/Formatting	3
		16
Semester II		
BUS123	Business Math	4
BIO125	Medical Terminology	3
ENG230	Business Communication	3
IRT229	Realtime Software Applications *(8 wks)*	1
BCA120	Business Computer Applications**	4
		15
Semester III		
BUS 121	Business Administration	4
BIO 101	Intro. to Anatomy and Physiology	3
	Non-technical Track Elective***	3
IRT231	Judicial Procedures	3
ENT120	Entrepreneurship	2
		15
Semester IV		
ACC 130	Business Law and Ethics	3
ACC121	Principles of Accounting I	4
	Social Science Elective*	3
IRT233	Transcription and Editing for Scopists	3
	IRT Technical Elective	3
		16

62 TOTAL CREDIT HOURS

* Student may select PSY121 or SOC121.
** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120
*** Student may select PSC121 Political Science; COM121 Effective Speaking; BUS222 Macroeconomics

A Computerized Stenograph Machine and Case Catalyst 4 V5-7 student version must be purchased prior to beginning this program. Please contact the IRT department.

NOTE: Courses may not be offered each semester; students should plan accordingly.

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Legal Assisting Technology

Legal secretaries and legal assistants are employed in private law firms, offices of public defenders, court systems, government agencies, corporate legal departments, insurance companies, banks, real estate agencies, community service agencies and programs, consumer organizations and health care facilities.

The program prepares students to assist attorneys in the performance of their professional duties.

Today's law firms are redefining their management structure out of economic necessity. Effective use of support staff is becoming increasingly important.

The goal is that graduates will be able to organize work areas, use legal resources, make decisions, and exhibit proficiency in the use of legal office procedures and legal information systems; apply practical knowledge and utilize technical skills such as data input methods (keyboarding and voice recognition), transcription, proofreading, legal document production, microcomputer applications, legal research, records management, and use of the Internet; demonstrate employability skills and professionalism in legal office occupations, and work in individual, team and group settings; must be able to form ideas and information verbally and in written form, use computational skills for solving legal office problems and making analytical judgments; acquire, organize and evaluate information to make decisions and solve problems in legal environments.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
OAD121	Keyboarding/Formatting	3
OAD130	Communication and Transcription Skills	3
BCA120	Business Computer Applications**	4
BUS121	Business Administration	4
IRT131	Legal Terminology	3
		20
Semester II		
OAD224	Legal Office Procedures	3
ENG230	Business Communication	3
OAD129	Keyboarding/Skillbuilding *(8 wks)*	1
OAD127	***Word Processing – Microsoft Word***	***3***
BUS123	Business Mathematics	4
OAD132	Records Management	3
		17
Semester III		
OAD239	Legal Transcription	3
COM121	Effective Speaking	3
OAD106	***Computer Applications – Microsoft Access*** *(8 wks)*	***1***
ACC130	Business Law and Ethics	3
ACC121	Principles of Accounting I	4
	Social Sciences Elective*	3
		17
Semester IV		
OAD237	Legal Office Applications	3
OAD235	Legal Research and Writing	3
OAD226	***Spreadsheets – Microsoft Excel***	***3***
OAD232	Administrative Information Technology Practicum	3
BUS122	Basic Economics	3
OAD108	Microsoft Outlook *(8 wks)*	1
OAD107	Digital Technologies *(8 wks)*	1
		17

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select SOC121, PSY121 or PSC121.
** Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

Students who are enrolled at the College for at least one semester and who have passed the Professional Legal Secretary (PLS) examination are eligible to receive credit toward an associate of applied business degree in legal assisting technology, subject to the review and approval of the appropriate department chair.

Microsoft Office Specialist Authorized Testing Center

Bold italicized courses indicate courses that contain content for Microsoft Office Specialist (MOS) certification.

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Marketing Management Technology

The many jobs involved in getting goods and services to market make marketing a diverse and fascinating field. Marketing jobs often provide great opportunities for creativity, personal accomplishment and financial reward.

There are more than 750,000 people employed as marketing, advertising and public relations managers. Marketing managers develop the firm's detailed marketing strategy. With the help of staff, they determine the demand for products and services offered by the firm and its competitors. They also identify potential customers. Marketing managers develop pricing strategy and work with advertising and sales managers to promote the firm's products and services to attract potential customers.

The goal is that graduates of the marketing management technology degree, or one of its options, will be able to apply mathematical skills appropriate to a management occupation; demonstrate proficiency with computers consistent with job demands; develop analytical skills in identifying and solving marketing/business problems; identify target markets for specific goods and services; determine the limits of test marketing techniques; use statistical methodology to evaluate test subjects, and develop a market plan.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MKT121	Principles of Marketing	3
BUS221	Microeconomics	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT121	Principles of Management	3
BUS222	Macroeconomics	3
MKT221	Sales	3
MKT222	Advertising	3
ACC133	Managerial Accounting	4
MKT227	Consumer Behavior	3
		19
Semester IV		
MKT229	Market Planning	4
MKT228	Business to Business Marketing	3
SOC121	Sociology	3
ACC130	Business Law and Ethics	3
MKT233	Market Research	3
		16

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Marketing Management Technology

E-Commerce Marketing Option

Recently, the widespread adoption of intranets, extranets, and the acceptance of the Internet as a business platform have created a foundation for electronic commerce that offers the potential for organizations to streamline complex processes, lower costs, and improve productivity. Business to business e-commerce is poised for rapid growth in the future.

The goal is that graduates of this option will be able to develop a Web site; understand the role of the Internet/intranet; and use the Internet for obtaining research information. These skills are in addition to the previously mentioned outcomes for students in the marketing management technology program.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
ECA228	Internet/Intranet Software Design and Development	3
		17
Semester II		
MKT121	Principles of Marketing	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
IMT124	Internet Design Tools	3
		16
Semester III		
MGT121	Principles of Management	3
BUS221	Microeconomics	3
MKT232	Internet Marketing	2
MKT222	Advertising	3
ACC133	Managerial Accounting	4
ECA229	Microsoft Server Side Scripting	3
		18
Semester IV		
MKT229	Market Planning	4
BUS222	Macroeconomics	3
MKT228	Business to Business Marketing	3
SOC121	Sociology	3
ACC130	Business Law and Ethics	3
ECA225	Client Side Scripting	3
		19

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.

A COLLEGE TECH PREP PARTICIPANT

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Marketing Management Technology

Logistics Option

Logistics is that part of the supply chain process that plans, implements and controls the efficient, effective flow and storage of goods, services, and related information from point of origin to point of consumption in order to meet customer requirements. It includes the areas of transportation, warehousing, order processing, vender negotiation, and distribution.

Effective logistics management can improve a firm's marketing effort by establishing consistent and dependable customer service levels.

The U.S. has one of the world's most highly developed logistics infrastructures, giving consumers and businesses access to an enormous variety of goods and services.

The goal of this option, in addition to those included for the Marketing Management program is to give the student an understanding of the role of logistics in national and multinational business and government activity. The student will be able to use a variety of analytical tools and techniques to solve logistics problems.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MKT121	Principles of Marketing	3
BUS221	Microeconomics	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT121	Principles of Management	3
BUS222	Macroeconomics	3
MKT226	Supply Chain Management	3
MKT232	Internet Marketing	2
ACC133	Managerial Accounting	4
SOC121	Sociology	3
		18
Semester IV		
MKT229	Market Planning	4
MKT233	Market Research	3
MKT234	Principles of Transportation	3
MKT235	Introduction to Logistics	4
ACC130	Business Law and Ethics	3
		17

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Marketing Management Technology

Sales Option

Marketing jobs often provide great opportunities for creativity, personal accomplishment and financial rewards. Personal selling is a marketing communication process by which a company representative interacts directly with the customer to communicate about the good or service.

In the U.S., 15.5 million people are employed in personal sales positions, according to the department of labor statistics. This growing field is estimated to have more than 17.4 million people employed in sales and related fields by 2010.

In many firms, the people working in the marketing department began their careers with the sales force. Sales experience gives them an understanding of the problems faced by salespeople, as well as the needs of customers. The people who determine marketing strategy must understand exactly how the products or services are sold and the buying methods of customers.

Many sales people earn a good living. Compensations are generally paid in proportion to the amount of sales generated.

Selling provides an excellent opportunity for people who do not like close supervision but still want the security of working for a large organization. A career in sales enables individuals to operate virtually as independent business people.

The goal is that graduates of this option will be able to make presentations in a professional manner using PowerPoint software; understand the concepts of customer relationship between selling and marketing; and be able to develop a sales force compensation system. These skills are in addition to the previously mentioned outcomes for students in the marketing management technology program.

SUGGESTED COURSE SEQUENCE

Semester I		Credit Hours
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
BUS123	Business Mathematics	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MKT121	Principles of Marketing	3
BUS221	Microeconomics	3
ACC127	Quantitative Business Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT121	Principles of Management	3
BUS222	Macroeconomics	3
MKT221	Sales	3
ACC133	Managerial Accounting	4
MKT227	Consumer Behavior	3
		16
Semester IV		
MGT221	Supervision	3
SOC121	Sociology	3
ACC130	Business Law and Ethics	3
MKT229	Market Planning	4
MKT226	Supply Chain Management	3
MGT224	Human Resource Management	3
		19

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Operations Management Technology

The heart of the free enterprise system in the United States has always been its manufacturers.

Operations management has become a challenging and vital element of American business. U.S. firms are as good as, or better than, competitors anywhere in the world.

Some of the major developments implemented by U.S. firms include: a customer focus, cost savings through site selection, faster response time to the market through flexible manufacturing, more savings on the plant floor through lean manufacturing, computer-aided manufacturing, total quality management and better statistical control techniques.

Operations refers to any process that accepts inputs and uses resources to change those inputs into useful outputs. Operations may include production operations such as computer manufacturers, building contractors and coal mines, or service operations such as hospitals, universities and banks.

The goal is that entry level graduates will be able to analyze and compare the major tasks of production and operations management; understand and apply quality control and other total quality management concepts; demonstrate statistical process control techniques; describe how personal and organizational values influence operations managers; and demonstrate and apply communications skills and quantitative methods.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BUS121	Business Administration	4
BCA120	Business Computer Applications*	4
MTH121	College Algebra and Trigonometry I	4
ENG124	College Composition †	3
COM121	Effective Speaking	3
		18
Semester II		
MGT121	Principles of Management	3
MKT121	Principles of Marketing	3
MTH222	Statistics	3
ENG230	Business Communication	3
ACC132	Financial Accounting	4
		16
Semester III		
MGT227	Operations Management	4
MGT221	Supervision	3
ACC133	Managerial Accounting	4
BUS221	Microeconomics	3
SOC121	Sociology	3
		17
Semester IV		
PHY101	Principles of Physics	3
MGT224	Human Resource Management	3
ACC130	Business Law and Ethics	3
MGT223	Business Decision-Making	4
BUS222	Macroeconomics	3
MKT226	Supply Chain Management	3
		19

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Successful completion of OAD102, OAD104, OAD105 and OAD106 is equivalent to and may be substituted for BCA120.

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Engineering Technologies

Students majoring in engineering technologies may pursue the associate of applied science degree in a variety of engineering technology programs such as: applied industrial technology, civil engineering technology, design engineering technology, electric power utility technology, electrical engineering technology, electrical maintenance technology, electronic engineering technology, environmental, health and safety technology, heating, ventilation and air conditioning technology and mechanical engineering technology. Engineering technology is a field in which scientific principles and techniques are applied toward solutions of problems in business and industry. The engineering technician typically works as a member of a professional team (technician/technologist), assisting the engineer and coordinating work performed by skilled workers. Areas of responsibility include: research, design, development, supervision, sales and production. Applied industrial technology technicians use similar abilities, with emphasis on areas of supervision, operations and skilled maintenance in a variety of areas. These areas include health care facilities, educational institutions and industrial settings.

In addition to these programs, the engineering technologies division offers a number of career enhancement certificates designed to enhance specific sets of skills.

Bachelor's degree:

In most of the associate degree programs, all or nearly all courses may be applied toward a bachelor's degree in technology. Bachelor's degree requirements and course transferability are controlled by the institution to which the student plans to transfer.

High school students:

High school students graduating from a *college tech prep* program can get a head start on their engineering technology associate degrees.

For more information, please call Stark State's Office of Admissions/Student Services at 330-966-5450.

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COLLEGE TECH PREP
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Applied Industrial Technology

The applied industrial technology degree program offers many career paths from industrial or facilities supervision to skilled mechanical or electrical maintenance. The comprehensive curriculum includes both basic and advanced manufacturing techniques as well as skilled mechanical and electrical maintenance principles and applications.

The program provides knowledge of traditional manufacturing methods as well as state-of-the-art and emerging technologies. Areas of expertise include robotics, precision machining, CNC, welding, hydraulics/pneumatics, pumps, pipefitting, mechanical and electrical skilled maintenance, computer control automation and advanced materials and processes.

The Stark State program is designed in a building block style which includes apprenticeship level courses. These courses provide the base to which students can add additional courses to allow completion of the associate degree program.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
MTH101	Introduction to Algebra	4
ENG124	College Composition †	3
MET123	Material Science	2
MST121	Blueprint Reading	2
		14
Semester II		
MTH121	College Algebra and Trigonometry	4
MST134	Hydraulic and Pneumatic Systems*	6
EST130	Electrical Circuits and Devices	4
MST131	Statistical Process Control Charts	2
		16
Semester III		
ENG221	Technical Report Writing	3
PHY121	Physics I	4
COM121/COM123	Effective Speaking or Inter-group Communications	3
IET228	Introduction to Robotics	2
MET225	Manufacturing Processes	3
		15
Semester IV		
MST221	Mechanical Drive Components	3
	Arts/Humanities/Social Sciences Elective**	3
	Technical Electives***	13
		19

64 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* May also be taken as two 8-week courses: MST122, MST123.

** Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS221, BUS222, PSC121

*** Select a minimum of 13 hours from AIT122, AIT123, AIT124, AIT125, AIT126, AIT127, AIT128, AIT129, AIT130, AIT131, AIT221, DET125, EET142, EET143, EST133, EST134, HVC124, HVC230, IET223, IET270, MST124, MST125, MST126, MST127, MST128, MST133, MST135, MST225.

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Applied Industrial Technology

One-Year CNC Technical Certificate

This one-year state-accredited technical certificate is designed to prepare the student with the appropriate skills needed to work in today's world of computer numeric controlled precision machining. This program is designed for both the individual returning to add to their existing skills and those entering the CNC precision machining field for the first time. Upon successful completion of the CNC one-year technical certificate program, the individual will have approximately one half the necessary credits towards an associate of applied science in applied industrial technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
MTH121	College Algebra and Trigonometry I	4
AIT122	Machine Tools	3
IET270	Dimensional Metrology and Inspection I	3
MST121/DET121	Blueprint Reading or Engineering Drawing	2/3
		12/13
Semester II		
DET125	Basic AutoCad	3
AIT123	Advanced Machine Tools	4
IET123	CNC Programming	4
ECA122	Computer Applications for Technical Professionals	3
		14
Summer		
AIT221	Advanced CNC	4
MET123	Material Science	2
		6

32/33 TOTAL CREDIT HOURS

A graduate of this program will earn a state-accredited certification.

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Civil Engineering Technology

Civil engineering technicians assist civil engineers in planning, designing and constructing highways, bridges, dams, tunnels, airports, water supply systems, buildings and other structures.

During the planning stages of a project, technicians estimate costs, prepare specifications for materials and work in design, drafting or surveying. During construction, they assist the contractor in scheduling, inspecting for conformance to blueprints and specifications and numerous other responsibilities.

The civil engineering technician graduating from Stark State College of Technology will have a basic theoretical background covered in the classroom. This background will then be enhanced by a series of strong practical laboratory applications which include both indoor and outdoor settings. Civil engineering technology students will study and use current computer programs in estimating and structural design as well as other areas.

The civil engineering technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET).

A graduate of this program will earn an associate of applied science degree in civil engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
CET121	Building Materials and Construction Methods	3
CET122	Architectural Drafting I	3
ETD121	Engineering Technology Seminar	1
		18
Semester II		
MTH122	College Algebra and Trigonometry II	3
PHY122	Physics II	4
MET124	Statics and Strengths of Materials	4
ECA122	Computer Applications for Technical Professionals	3
CET125	Soil Mechanics	3
CET124	Highway and Map Drawing	2
		19
Semester III		
ENG221	Technical Report Writing	3
MTH221	Concepts of Calculus	3
CET227	Surveying I	3
CET223	Structural Design I	3
CET222	Concrete and Asphalt Testing	3
CET232	Land Planning and Design	3
		18
Semester IV		
COM121/COM123	Effective Speaking or Inter-group Communications	3
CET226	Estimating	3
CET224	Structural Design II	3
CET225	Site and Building Service Systems	3
CET228	Surveying II	3
	Arts/Humanities/Social Sciences Elective*	3
		18

73 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Civil Engineering Technology

Architectural Option

This program will provide students with the opportunity to analyze the role of architecture in the building construction industry. It will develop their understanding of the design process and the relationship of the architect, engineer and contractor.

In the classroom, laboratory and field, students will be introduced to the fundamentals of both manual and computer-aided drafting, fundamentals of design, building construction, mechanical equipment and the basic engineering of structures. The program emphasizes the establishment of basic knowledge of the aesthetics of architecture, marketable talent in drafting/design and an understanding of the principles of engineering as they relate to architecture.

Graduates of this technical major may work as technicians in architectural and engineering offices, construction estimating, general contracting, drafting, building supply firms, public agencies and as technical salespeople.

The civil engineering technology program is accredited by the technology accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET).

A graduate of this program will earn an associate of applied science degree in civil engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
CET121	Building Materials and Construction Methods	3
CET122	Architectural Drafting I	3
ETD121	Engineering Technology Seminar	1
		18
Semester II		
MTH122	College Algebra and Trigonometry II	3
PHY122	Physics II	4
MET124	Statics and Strengths of Materials	4
ECA122	Computer Applications for Technical Professionals	3
CET123	Architectural Drafting II	3
DET125	Basic AutoCAD	3
		20
Semester III		
ENG221	Technical Report Writing	3
MTH221	Concepts of Calculus	3
CET227	Surveying I	3
CET223	Structural Design I	3
CET232	Land Planning and Design	3
CET235	Construction Management, Job Cost and Safety	3
		18
Semester IV		
COM121/COM123	Effective Speaking or Inter-group Communications	3
CET226	Estimating	3
CET225	Site and Building Service Systems	3
CET233	Architectural Design	3
CET234	A/E CAD	2
	Arts/Humanities/Social Sciences Electives*	3
		17

73 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Civil Engineering Technology

Construction Management Option

This program will provide students with the opportunity to study the managerial and technological facets of the residential and commercial construction industry. By combining technical instruction concerning construction with management concepts, the program will prepare students to take on a supervisory role in the field. It will develop their understanding of current building codes, construction materials and processes, principles of design, and construction safety.

In the classroom, laboratory and field, students will be introduced to the fundamentals of design, building construction and the basic engineering of structures. This background will then be further enhanced by exposing students to such topics as interpreting construction documents, the importance of communication skills, project scheduling, as well as understanding job cost reports.

Graduates of this technical major may work as technicians in project management, construction estimating, general contracting, specification writing, project scheduling, construction sales, public agencies and project inspecting.

A graduate of this program will earn an associate of applied science degree in civil engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
CET121	Building Materials and Construction Methods	3
CET237	Interpreting Construction Documents	2
DET125	Basic AutoCAD	3
ETD121	Engineering Technology Seminar	1
		17
Semester II		
MTH122	College Algebra and Trigonometry II	3
PHY122	Physics II	4
MET124	Statics and Strengths of Materials	4
ECA122	Computer Applications for Technical Professionals	3
CET125/CET222	Soil Mechanics or Concrete and Asphalt Testing	3
		17
Semester III		
ENG124	College Composition †	3
MTH221	Concepts of Calculus	3
CET227	Surveying I	3
CET223	Structural Design I	3
CET232	Land Planning and Design	3
CET235	Construction Management, Job Cost and Safety	3
		18
Semester IV		
ENG221	Technical Report Writing	3
COM121/COM123	Effective Speaking or Inter-group Communications	3
CET225	Site and Building Service Systems	3
CET239	Building Code Applications	2
CET226	Estimating	3
	Arts/Humanities/Social Sciences Elective*	3
		17

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121

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Civil Engineering Technology

Surveying Option

Today's surveying technician must have skills in many areas, including mathematics, law, history, methods of measurement, graphics, global positioning and site planning.

A surveying technician assists professional surveyors in performing subdivision design, property and topographic surveys, establishing control for aerial surveying, preparing legal descriptions and controlling construction projects.

In the classroom, laboratory and field, we introduce students to the fundamentals of surveying, equipment usage, graphics (both manual and computerized), subdivision planning, control surveys, global positioning principles, subdivision design and legal principles of boundary location.

The graduate will have theoretical background and strong practical applications experience.

Upon completion of the surveying major, graduates are qualified to work in the following areas: establishing land boundaries, researching deeds, drafting, land development, global positioning surveying, construction layout and control, collection of data for charts and maps, and preparation of legal descriptions.

The civil engineering technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET).

A graduate of this program will earn an associate of applied science degree in civil engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
CET121	Building Materials and Construction Methods	3
CET227	Surveying I	3
ETD121	Engineering Technology Seminar	1
		18
Semester II		
MTH122	College Algebra and Trigonometry II	3
PHY122	Physics II	4
MET124	Statics and Strengths of Materials	4
ECA122	Computer Applications for Technical Professionals	3
CET124	Highway and Map Drawing	2
CET228	Surveying II	3
		19
Semester III		
ENG221	Technical Report Writing	3
MTH221	Concepts of Calculus	3
CET222	Concrete and Asphalt Testing	3
CET232	Land Planning and Design	3
CET231	Legal Principles of Surveying	3
DET125	Basic AutoCAD	3
		18
Semester IV		
COM121/COM123	Effective Speaking or Inter-group Communications	3
CET226	Estimating	3
CET229	Surveying III	3
CET221	Surveying Graphics	3
CET236	Global Positioning System	3
	Arts/Humanities/Social Sciences Elective*	3
		18

73 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121

A COLLEGE TECH PREP PARTICIPANT

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Design Engineering Technology

Design engineering technicians prepare detailed drawings based on rough sketches, specifications and calculations. They determine the strength, type and quantity of materials and give the dimensions necessary to make detailed parts or assemblies.

Design engineering technicians might specialize in the design of tools, machines or products for structural, electrical, civil and mechanical systems and represent ideas graphically through traditional drawings or computer-aided design (CAD) systems.

The design engineering technology program is regularly evaluated and approved or revised by an advisory committee of professionals who represent local businesses and industries. This ongoing evaluation process ensures that design engineering technology students receive state-of-the-art education that will help them get good jobs.

The program in design engineering technology is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET).

A graduate of this program will earn an associate of applied science degree in design engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
DET121	Engineering Drawing	3
ENG124	College Composition †	3
ETD121	Engineering Technology Seminar	1
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
		15
Semester II		
DET122	Descriptive Geometry	3
DET124	Working Drawings	3
DET125	Basic AutoCAD	3
MTH122	College Algebra and Trigonometry II	3
PHY122	Physics II	4
ECA122	Computer Applications for Technical Professionals	3
		19
Semester III		
DET231	Tool Design	3
COM121/COM123	Effective Speaking or Inter-group Communications	3
MET225/AIT122	Manufacturing Processes or Machine Tools II	3
MET124	Statics and Strengths of Materials	4
MTH221	Concepts of Calculus	3
	Design Elective I (CAD)**	3
		19
Semester IV		
DET223	Kinematics	3
MET228	Machine Design	4
DET226	Geometric Dimensioning and Tolerancing	2
ENG221	Technical Report Writing	3
	Arts/Humanities/Social Sciences Elective*	3
	Design Elective II (CAD)**	3
		18

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121
** Design Electives: DET126, DET131, DET230

COLLEGE TECH PREP
A COLLEGE TECH PREP PARTICIPANT

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Electric Power Utility Technology*

Line Worker Technician or Substation Technician Options

The local and regional electric utility industry has experienced a shortage of candidates for employment. Technology and required employee job skills within the electric utility industry are constantly changing; increasing the demand for a skilled workforce. The ultimate goal of the electric utility industry is to attract college level trainees to the electric utility industry. Graduates of the Stark State electric utility technology program can expect to be actively recruited.

This program is designed to give students the advantage required for easy acquisition of desirable long-term employment in the electric utility industry. Graduates of this program will be more employable and be able to command a higher starting wage rate than the typical entry-level employee. The graduating student will also enjoy an increased likelihood of promotion through an enhanced ability to be a productive addition to a company team. The electric power utility technology degree program will prepare graduates for employment opportunities in a variety of electrical fields, with an emphasis in the line worker area. (The overhead line technology curriculum prepares the student for hands-on, transmission support system installation/maintenance and electrical substation maintenance.)

A graduate of this program will earn an associate of applied science degree.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
MTH101	Introduction to Algebra	4
ENG124	College Composition †	3
EUT121/EUT123	Overhead Line Technology I or Substation Technology I	6
		16
Semester II		
MTH121	College Algebra and Trigonometry I	4
EET120	DC Circuit Analysis	4
COM123	Inter-group Communications	3
EUT122/EUT124	Overhead Line Technology II or Substation Technology II	6
		17
Semester III		
ETD202	Engineering Technology Division – Independent Study	2
		2
Semester IV		
PHY101	Principles of Physics	4
BUS122	Basic Economics	3
EET122	AC Circuit Analysis	4
ACC130	Business Law and Ethics	3
EUT221/EUT224	Overhead Line Technology III or Substation Technology III	6
		20
Semester V		
EET226	Transmission and Distribution	3
ENG221	Technical Report Writing	3
EET128	NEC and Electrical Systems Design	2
EST129	Switchgear, Transformers and Controls	2
EUT222/EUT225	Overhead Line Technology IV or Substation Technology IV	7
		17

72 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Enrollment and participation in this program is at the sole discretion of the FirstEnergy Corp.

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Electrical Engineering Technology

Our society is becoming increasingly dependent on electrical energy. Consumer products and the industrial processes required to produce them have been greatly influenced by the application of electrical and electronic technology. This has had an impact on research, development, testing, manufacturing and maintenance of existing and new products. This expanded "high-tech" effort has resulted in an increasing need for highly trained technicians in all areas of technology.

Electrical engineering technology is concerned with the generation, transmission and distribution of electrical power; its application to power and control industrial processes and wiring systems design.

Electrical technicians are part of the engineering team needed to fulfill the work in this broad and challenging field. The electrical engineering technician must have theoretical knowledge of the field and extensive hands-on experience with laboratory techniques and equipment.

Job opportunities as an electrical engineering technician include: transmission and distribution planner, industrial process control technician, electrical contractor, project manager, electrical technician, engineering assistant and service technician.

The application of electronics to electrical systems control has greatly influenced the educational background that electrical engineering technicians need. As a result, the electrical engineering technology program includes a number of electronic courses, as well as the traditional courses in electrical power, machines and control.

The electrical engineering technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET).

A graduate of this program will earn an associate of applied science degree in electrical engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
EET120	DC Circuit Analysis	4
ETD121	Engineering Technology Seminar	1
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
		19
Semester II		
EET122	AC Circuit Analysis	4
EET123	Electronic Devices and Circuits	4
EET125	Circuit Manufacturing Techniques	1
EET126	Electrical Machines	4
ECA128	Visual Basic Programming	3
MTH122	College Algebra and Trigonometry II	3
		19
Semester III		
DET125	Basic AutoCad	3
EET128	NEC and Electrical Systems Design	2
COM121/COM123	Effective Speaking or Inter-group Communications	3
EET227	PLCs and Industrial Controls I	3
MTH221	Concepts of Calculus	3
ENG221	Technical Report Writing	3
		17
Semester IV		
EET226	Transmission and Distribution	3
EET228	PLCs and Industrial Controls II	3
EET232	Industrial Electronics	3
EET233	Technical Project – Electrical	1
	Arts/Humanities/Social Sciences Elective*	3
EET129	Optics	2
		15

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Electrical Engineering Technology

Electro-Mechanical Option

This program will allow the student an in-depth study of the main principles and applications of electrical engineering technology with an emphasis on mechanical engineering technology fundamentals. In today's competitive world, electrical engineering technicians with mechanical skills are in demand.

Electrical engineering technology is concerned with the generation, transmission, and distribution of electrical power; its application to power and control industrial processes and wiring systems design. The mechanical coursework focuses on materials, stress, strain, heat, friction, and vibration.

A graduate of this program will earn an associate of applied science in electrical engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
EET120	DC Circuit Analysis	4
ETD121	Engineering Technology Seminar	1
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
		19
Semester II		
EET122	AC Circuit Analysis	4
EET123	Electronic Devices and Circuits	4
EET126	Electrical Machines	4
ECA222	Introduction to C++ Programming	3
MTH122	College Algebra and Trigonometry II	3
		18
Semester III		
DET125	Basic AutoCad	3
MET123	Material Science	2
MET124	Statics and Strengths of Materials	4
EET227	PLCs and Industrial Controls I	3
MTH221	Concepts of Calculus	3
ENG221	Technical Report Writing	3
		18
Semester IV		
COM121/COM123	Effective Speaking or Inter-group Communications	3
MET222	Fluid Power	4
MET225	Manufacturing Processes	3
MET227	Thermodynamics and Heat Transfer	3
EET129	Optics	2
	Arts/Humanities/Social Sciences Elective*	3
		18

73 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121.

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Electrical Maintenance Technology

This degree program provides an understanding of the installation, operation, maintenance and repair of various electrical systems in electrical and electronic equipment. Electrical maintenance concentrates on the industrial environment and prepares students to maintain and repair electrical/electronic equipment used in government, commercial and industrial facilities.

Graduates can look forward to jobs as electronic service technicians, electrical service technicians, field service technicians, electricians, electrical maintainers and electronic or electrical equipment installers.

The curriculum includes electrical and electronic analysis and fundamentals, digital electronics, electrical and electronic trouble-shooting, digital communications, transformers, National Electric Code, electrical machines, industrial controls, programmable controllers, hydraulics, pneumatics and heating, ventilation and air conditioning. This knowledge is essential for graduates who are required to maintain and repair modern electrical/electronic equipment.

A graduate of this program will earn an associate of applied science degree in electrical maintenance technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
EET120	DC Circuit Analysis	4
ETD121	Engineering Technology Seminar	1
MST134	Hydraulic and Pneumatic Systems	6
PHY121	Physics I	4
MTH121	College Algebra and Trigonometry I	4
		19
Semester II		
EET125	Circuit Manufacturing Techniques	1
MST121	Blueprint Reading	2
EET123	Electronic Devices and Circuits	4
EET126	Electrical Machines	4
ECA122	Computer Applications for Technical Professionals	3
EET122	AC Circuit Analysis	4
		18
Semester III		
EET128	NEC and Electrical Systems Design	2
EET227	PLCs and Industrial Controls I	3
MST221	Mechanical Drive Components	3
COM121/COM123	Effective Speaking or Inter-group Communications	3
EST129	Switchgear, Transformers and Controls	2
ENG124	College Composition †	3
		16
Semester IV		
EET228	PLCs and Industrial Controls II	3
EST221	Electrical/Electronic Troubleshooting	3
ENG221	Technical Report Writing	3
HVC121	HVAC Principles I	3
	Technical Elective**	3
	Arts/Humanities/Social Sciences Elective*	3
		18

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121.
** Select from EET232 or EET244.

COLLEGE TECH PREP
A COLLEGE TECH PREP PARTICIPANT

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Electronic Engineering Technology

Space vehicles, C.A.T. scans, personal computers, electronically controlled machines, computerized automobile functions and global communication are just a few achievements of modern industry.

Well-educated and well-trained technical personnel are needed for research, development, production, testing, installation, maintenance and repair of electronic equipment, machinery and products.

Electronic engineering technicians must have theoretical knowledge of the field and extensive "hands-on" experience in laboratory techniques and equipment. Stark State combines theoretical classroom education with "hands-on" laboratory experience to ensure excellent technical knowledge and skills.

Job opportunities available to electronic engineering technicians include: audio technician, biomedical, industrial network, customer service technician, process control technician, field engineering specialist and electronic technician.

The electronic engineering technology program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET).

A graduate of this program will earn an associate of applied science degree in electronic engineering technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
EET120	DC Circuit Analysis	4
ETD121	Engineering Technology Seminar	1
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
		19
Semester II		
DET125	Basic AutoCAD	3
EET122	AC Circuit Analysis	4
EET123	Electronic Devices and Circuits	4
EET125	Circuit Manufacturing Techniques	1
ECA128	Visual Basic Programming	3
MTH122	College Algebra and Trigonometry II	3
		18
Semester III		
EET262	Pulse and Digital Integrated Circuits	4
EET129	Optics	2
EET230	Electronic Circuits I	3
EET248	Workstation Interfacing	3
MTH221	Concepts of Calculus	3
ENG 221	Technical Reporting Writing	3
		18
Semester IV		
EET225	Digital Communications and Systems Analysis	3
EET231	Electronic Circuits II	3
EET232	Industrial Electronics	3
EET235	Technical Project – Electronic	1
COM121/COM123	Effective Speaking or Inter-group Communications	3
	Arts/Humanities/Social Sciences Elective*	3
		16

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121.

COLLEGE TECH PREP
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Environmental, Health and Safety Technology

The associate of applied science degree in environmental, health and safety (EH&S) technology prepares students to apply their skills in science, engineering, communication and economics to issues affecting the environment. This includes such issues as the quality of air, water and land. Other areas include workplace safety, environmental regulation and compliance and various environmental systems.

Environmental career fields include data collection, instrumentation, regulation, health and safety, natural resources, waste minimization and pollution prevention. Additionally, the EH&S technician is in demand with a vast array of manufacturing firms.

The program has been developed with ongoing input from an advisory committee of industry experts to ensure the curriculum includes the knowledge and skills needed in business and industry. Graduates of Stark State's EH&S technology program will be uniquely qualified to meet the needs of both the private and public sectors as they face growing EH&S regulation and concern.

A graduate of this program will receive an associate of applied science degree in EH&S technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
MTH121	College Algebra and Trigonometry I	4
ENG124	College Composition †	3
BIO126	Science, Energy and the Environment	4
ETD121	Engineering Technology Seminar	1
CHM121/CHM141	General Chemistry or General Chemistry I	4/5
	Arts/Humanities/Social Sciences Elective*	3
		19/20
Semester II		
CHM122/CHM142	Organic and Biological Chemistry or General Chemistry II	4/5
MTH222	Statistics	3
ECA122	Computer Applications for Technical Professionals	3
ENV121	Regulations and Compliance	3
ENV221	OSHA - 40-hour HAZWOPER	2
		15/16
Semester III		
ENV222	Industrial Processes and Pollution	3
ENV223	Basic Geology/Hydrology	3
ENV224	Air Sampling, Analysis, and Control	3
COM121/COM123	Effective Speaking or Inter-group Communications	3
	Arts/Humanities/Social Sciences Elective*	3
		15
Semester IV		
ENV236	Environmental, Health and Safety Special Projects	3
ENG221	Technical Report Writing	3
ENV225	Solid and Hazardous Waste Sampling, Analysis and Management	3
ENV226	Water Sampling, Analysis, and Control	3
ENV228	Health and Safety	3
ENV230	OSHA 8-hour Refresher**	1
		16

65/67 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121

** ENV 230 may be taken by students who wish to complete annual refreshers of their 40-hour HAZWOPER training.

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Heating, Ventilating, and Air Conditioning Technology

Today's heating, ventilation, air conditioning and refrigeration (HVAC/R) industry makes possible modern living including medicine, technology, and personal comfort at home and on the job, as well as food preservation. In fact, it supports almost every component of our way of life. The HVAC industry is growing and becoming more technologically complex. As a result, industry leaders have mandated that employees have a variety of skills including technical problem solving, communications, and customer relations. The new HVAC employee must be a professional in every way and has great potential for advancement. Areas of opportunity include factory or distributor technical representative; factory, distributor or dealer sales professional; system design technician; distributor or dealer customer service manager; project estimator; project manager; dealer field service technician and more.

Stark State College offers a commercial/industrial lab as well as a residential lab totaling approximately 4000 square feet. Both labs have a wide variety of modern HVAC and refrigeration equipment due to the many area HVAC and refrigeration businesses that support the program with state-of-the-art equipment. The HVAC program also has a 750-square-foot full sheet metal lab.

Students have the opportunity to obtain a variety of HVAC/R certifications in the program including ARI ICE (industry competency exams) tests, EPA refrigerant certification, and NATE (North American Technician Excellence) exams. Four NATE-approved courses are also offered for those seeking re-certification.

A graduate of this program will earn an associate of applied science degree in heating, ventilating and air conditioning technology.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition †	3
MTH101	Introduction to Algebra	4
HVC121	HVAC Principles I	3
CET121	Building Materials and Construction	3
ECA122	Computer Applications for Technical Professionals	3
	Arts/Humanities/Social Sciences Elective*	3
		19
Semester II		
HVC122	HVAC Principles II	3
HVC123	Sheet Metal Layout I	3
HVC227	HVAC Field Installation Techniques/Procedures	4
HVC234	HVAC Electrical Systems and Applications	3
PHY101	Principles of Physics	4
		17
Semester III		
MST121	Blueprint Reading	2
MST126	Pipefitting Principles and Applications	4
HVC222	HVAC Design and Application	3
HVC223	HVAC System Operation and Troubleshooting - Heating	3
COM121/COM123	Effective Speaking or Inter-group Communications	3
	Arts/Humanities/Social Sciences Elective*	3
		18
Semester IV		
HVC224	HVAC System Operation and Troubleshooting - Cooling	3
HVC226	Sheet Metal Layout II	3
HVC232	Advanced HVAC Applications and Controls	3
HVC235	Refrigeration	3
HVC236	Advanced HVAC Electrical Applications	3
ENG221	Technical Report Writing	3
		18

72 TOTAL CREDIT HOURS

Following graduation from Stark State's HVAC program, students may study at Ferris State's (2+2) online program and receive a bachelor of science in HVAC technology.

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121

A COLLEGE TECH PREP PARTICIPANT

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Heating, Ventilating, and Air Conditioning Technology

One-Year HVAC Certificate Program

This is a one-year state-accredited technical certificate in HVAC Technology. It provides the students with many of the core technical courses in heating ventilation and air conditioning (HVAC) technology. This program is approximately one-half the requirements for the associate of applied science in HVAC technology. Many students who earn this one-year technical certificate continue in the program to get an associate degree in HVAC technology.

Students also have the opportunity to take the EPA certification test.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
HVC121	HVAC Principles I	3
HVC123	Sheet Metal Layout I	3
ECA122	Computer Applications for Technical Professionals	3
MTH101	Introduction to Algebra	4
		13
Semester II		
HVC223	HVAC System Operation and Troubleshooting – Heating	3
HVC234	HVAC Electrical Systems and Applications	3
HVC122	HVAC Principles II	3
HVC227	Field Installation Techniques and Procedures	4
		13
Semester III		
HVC224	HVAC System Operation and Troubleshooting – Cooling	3
CET121	Building Materials and Construction	3
		6

32 TOTAL CREDIT HOURS

A graduate of this program will earn a state-accredited certification.

A COLLEGE TECH PREP PARTICIPANT

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Mechanical Engineering Technology

The purpose of the mechanical engineering technology program is to provide education for the application of scientific and engineering principles in the support of mechanical engineering activities. This associate degree technician program is similar to a bachelor degree, but the associate program places more emphasis on practical application and experience.

As a mechanical engineering technician, students may work in many areas. In design and development, they would prepare sketches, drawings and layouts, and analyze proposed equipment components. Analysis of cost and practical value of design must be incorporated. Therefore, technicians must understand the mechanical principles involving design, tolerance, stress, strain, friction and vibration.

Technicians may become involved in testing equipment and materials for recommending design changes, improving performance or eliminating production problems. Therefore, technicians must be able to conduct projects, record and represent data, analyze results and prepare formal reports.

The program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET).

Fuel Cell Technology Track

The mechanical engineering technology/fuel cell technology track incorporates mechanical, electrical and chemical technologies to provide education for the application of scientific and engineering principles focused on alternative energy sources and more specifically, fuel cell technology. Students pursuing the fuel cell technology track should substitute the following courses in the mechanical engineering technology degree:

MET229	Introduction to Alternative Energy and Fuel Cells *(replaces MET223)*
MET230	Analysis and Applications of Types of Fuel Cells *(replaces MET228)*
MET231	Fuel Cell Systems *(replaces MET221)*
MET232	Fuel Cell Project *(replaces MET226)*
CHM121	General Chemistry or CHM141 General Chemistry I *(replaces PHY122)*

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ETD121	Engineering Technology Seminar	1
MET123	Material Science	2
DET121	Engineering Drawing	3
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
		17
Semester II		
MET124	Statics and Strength of Materials	4
MET225/AIT122	Manufacturing Processes or Machine Tools	3
MTH122	College Algebra and Trigonometry II	3
PHY122	Physics II	4
ECA122	Computer Applications for Technical Professionals	3
		17
Semester III		
COM121/COM123	Effective Speaking or Inter-group Communications	3
MET228	Machine Design	4
MET221	Advanced Strength of Materials	2
MET222	Fluid Power	4
DET125/DET131	Basic AutoCAD or ProEngineer	3
MTH221/MTH223	Concepts of Calculus or Analytical Geometry	3/4
		19/20
Semester IV		
MET223	Dynamics	2
EST130	Electrical Circuits and Devices	4
MET227	Thermodynamics and Heat Transfer	3
MET226	Technical Project – Mechanical	2
ENG221	Technical Report Writing	3
	Arts/Humanities/Social Sciences Elective*	3
		17

70/71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, BUS222, PSC121

A COLLEGE TECH PREP PARTICIPANT

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General Studies

By its very nature, the general studies division is multi-disciplinary. Its departments offer courses that provide the foundation on which success in all the College's degree and certificate programs ultimately relies. Nearly all the College's students take coursework through the general studies division since most technical degree programs require 21 credits in these areas of study. The general studies division also offers the courses that comprise the College's Transfer Module and a number of other courses that are components of Ohio's more specialized Transfer Assurance Guides (TAGs).

The mission statement of Stark State College indicates that we are concerned with, among other things, preparing students for education beyond the associate degree; helping students acquire positive attitudes toward society, self and work; and fostering participative, intelligent and informed citizenship.

The general studies faculty support this mission by providing students with a foundation of knowledge in their respective disciplines and facilitating the development of students' analytical abilities. Transferable knowledge and skills, which are essential for successful work performance, future growth and education, have a high priority. Our goal is to provide a platform for lifelong growth and development leading to higher levels of knowledge, skill and competency. Students are presented opportunities to develop skills for problem-solving and conflict resolution using language logically, critically and creatively.

Through the general studies curriculum, Stark State College addresses the whole person in terms of values, self-awareness and understanding. Self-awareness includes helping students to understand, use and present technical information. It focuses upon techniques of self-analysis and the skills needed to find work that our students can do well and enjoy. A high premium is placed upon developing effective interpersonal skills and the attitudes and abilities required to work purposefully and effectively with others.

Associate of Arts Degree (A.A.)

(Awarded jointly with Kent State University)

Students who are undecided about a career path, or who have accumulated college credit hours, will find the associate of arts degree (A.A.) an exciting degree program. Awarded jointly with Kent State University--Stark Campus, this degree is intended to position students for successful employment or more focused study at the baccalaureate level.

Specifically designed to promote higher educational attainment and the establishment of successful careers, the A.A. opens a multitude of pathways for graduates to pursue a baccalaureate degree in virtually any area of study.

In particular, associate of arts degree graduates can make a seamless transition to B.A. programs at Kent State University-Stark Campus, thanks to a special partnership between the two institutions.

Candidates for the associate of arts degree can select from five options or tracks:

Associate of Arts General Studies Track
Associate of Arts Fine Arts—Art Track
Associate of Arts Fine Arts—Music Track
Associate of Arts Info Tech Track
Associate of Arts Math Science Track

A total of 60 hours is required for completion of the degree and depending upon the selected track, students will choose classes from English, mathematics, arts and humanities, social sciences and basic sciences. Included in the total are 24 hours of electives.

For additional information, please contact the Office of Admissions/Student Services.

Associate of Science Degree (A.S.)

(Awarded jointly with Kent State University)

Stark State College offers a 60-credit joint associate of science (A.S.) degree for the student who is an undeclared major or undecided about a course of study to pursue in the sciences.

The associate of science degree is jointly awarded by Stark State College and Kent State University – Stark campus. The program prepares students for pursuit of a four-year bachelor of science degree at a four-year college or university.

Stark State College and Kent State University – Stark campus follow this reciprocal program:

- Students who declare Stark State College to be their home institution will take a minimum of 15 credits at the Kent State University - Stark campus.
- Students who declare Kent State University – Stark campus to be their home institution will take a minimum of 15 credits at Stark State College.
- A specific number of courses in English (6 credits), communication (3 credits), mathematics (6 credits), fine arts (3 credits), humanities (3 credits), social sciences (6 credits), and natural and physical sciences (8 credits) will generally be required.

Students in the joint associate of science degree program must meet with advisors at both institutions for appropriate advising and to assure that courses selected for completion of the joint associate of science degree will transfer to the four-year college or university selected.

For details about the joint associate of science degree, contact the department chair, science.

Associate of Technical Studies Degree (A.T.S.)

The associate of technical studies (A.T.S.) degree is awarded for the successful completion of a program in technical education that is individually planned by the student and advisors to meet a specific need that is not available in any of the current degree programs. This interdisciplinary program is intended for the individual who has been gainfully employed in an occupation for several years and is interested in obtaining credit for previous training and experience as well as additional coursework to enhance career opportunities. A minimum of 18 semester hours must be earned in the major area of concentration. A committee composed of the major and minor department chair and the major division dean will work out the program of study with the student. Final approval will be granted by the provost of the College.

All associate degree programs must contain a minimum of 30 semester credit hours of technical courses, 15 semester credit hours each of basic related and general studies courses. The program must identify the course in each of these areas that will meet the educational needs of the individual.

The educational program must be approved prior to the student's having earned 30 semester hours of credit at the College.

For additional information about the associate of technical studies, contact the Office of Admissions/Student Services.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Biotechnology

Biotechnology represents the cutting edge of science, often leading to groundbreaking discoveries in a wide variety of fields. Biotechnology is one of the fastest growing industries in the United States and in the northeastern Ohio area.

Stark State's biotechnology program provides students with the training necessary to work and thrive in biotechnology/bioscience or other technology-rich industrial or academic-based research laboratories. The courses are designed to be hands-on and provide training which implements the most up-to-date techniques and instrumentation currently being used in these laboratories.

Graduates of this program will be prepared to work in biotechnology/bioscience laboratories in such positions as research and development, and quality control. In addition, professionals with biotechnology backgrounds, who can communicate well with researchers and customers, are needed in sales and marketing.

This program is an option for individuals thinking of articulating into a bachelor's degree in biotechnology, biology or chemistry at a four-year college or university. Many of these courses are also applicable to the associate of science degree offered jointly by Stark State and Kent State University.

Many analysts have predicted that biotechnology will be one of the most important applied sciences of the 21st century.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BIO141	General Biology I	4
CHM141	General Chemistry I	5
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
BST120	Intro to Biotechnology	1
BST121	Basic Biotechnology Methods	1
		18
Semester II		
BIO142	General Biology II	4
CHM142	General Chemistry II	5
MTH122	College Algebra and Trigonometry II	3
BST122	Advanced Biotechnology Methods	3
BST130	Biotechnology Seminar I	1
		16
Summer		
BIO221	Principles of Microbiology	4
BST221	Cell and Tissue Culture	2
		6
Semester III		
MTH222	Statistics	3
BST220	Molecular Biology Techniques	4
BST222	Cellular and Subcellular Separations	4
BST225	Biotechnology Instrumentation	3
		14
Semester IV		
BST240	Bioinformatics	3
BST250	Bioprocesses and Manufacturing	4
BST230	Biotechnology Seminar II	1
BST271-277	Biotech Independent Study	3-7
		11-15

65-69 TOTAL CREDIT HOURS

† Based on SSCT placement score.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Technical Communications

The technical communications program at Stark State College prepares students for a career in the diverse and growing field of technical communications. Curriculum is designed to cover a wide breadth of requirements, including the ability to write clearly, edit, and design technical documents, as well as to expose students to courses in a variety of disciplines. These requirements include a thorough grounding in technical writing, as well as a focus on the communicative skills necessary to succeed in a career as a communications professional.

Graduates who earn an associate of applied science in technical communications may be employed in computing, biotech, manufacturing, aviation, and medicine, among others, with the option of further pursuit of a bachelor's degree in communications while maintaining oneself in the workforce. In addition, all graduates serve an internship designed to introduce them to technical writing in the workplace.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ENG124	College Composition *(1st 8 wks)*	3
ENG224	Composition and Literature *(2nd 8 wks)*	3
	Math, Science, or Social Science Elective*	4
ECA122	Computer Applications for Technical Professionals	3
COM122	Communication Theory	3
		16
Semester II		
	Math, Science, or Social Science Elective*	3
ENG221	Technical Report Writing	3
COM121	Effective Speaking	3
COM124	Technical Editing and Layout	3
ENG227	Writing for Media	3
		15
Summer Session		
	Math, Science, or Social Science Electives*	3
		3
Semester III		
	Math, Science, or Social Science Electives**	7
	Technical Elective	3
ENG228	Writing for the Web	3
ENG31001	Grammar and Style *(offered at KSU-Stark only)*	3
		16
Semester IV		
COM223	Capturing Verbal Information	3
	Math, Science, or Social Science Elective*	3
ENG229	Grant Writing	3
COM224	Internship	6
		15

65 TOTAL CREDIT HOURS

* Select one
** Select two

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

In order to keep pace with progress, the College reserves the right to change fees, academic programs, course descriptions, or any other statements, contained in this catalog at the discretion of the College or its Board of Trustees. Please refer to www.starkstate.edu for the most current information.

Health Technologies

Health technologies are those areas in which all health personnel are working toward the common goal of providing the best possible service in patient care and health promotion. There is a large cluster of health care-related professions and personnel whose functions include assisting, facilitating or complementing the work of the physicians and other specialists in the health care system.

Individuals in many health care fields work without direct supervision, while others can only work in a supervised setting. As machines and techniques change, the individual must be able to accept new innovations to ensure continued demand for their services.

Health care personnel are highly regulated. After showing their proficiency in the classroom as practitioners of their art, they take certifying exams and are licensed by state or federal agencies, and their titles are protected by certification. To receive accreditation or certification in a technology, the faculty, college and curriculum must be reviewed and must meet the standards of professional health accreditation bodies. All of the degree granting technologies in the health technologies division have received multiple-year accreditation or certification.

Health technologies students at Stark State College spend time in the classroom and laboratory, learning the techniques and skills of their profession. Having learned these skills, students work and learn in a clinical setting to gain practical experience in their field under the supervision of a clinical instructor. Upon completion of their studies, students may sit for certifying exams to receive their titles.

Acceptance to Stark State College does not ensure acceptance into a particular health program. Students must apply to their program of choice. See Application Requirements for Health Technologies.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

Application Requirements for Health Technologies

Applications for the Health Technologies are available in the **Office of Admissions/Student Services**. Applications that have been filled out are to be returned to the **Academic Records/Registrar's Office**. The following steps should be completed by anyone wishing to apply to a health program.

1. Submit a Stark State College of Technology application and an official high school transcript to the **Academic Records/Registrar's Office**.
2. Contact the Office of Admissions/Student Services to make arrangements to take the COMPASS pre-admission placement tests if applicable. The COMPASS test is not required for applicants to health programs who transfer appropriate college credit. In cases when the COMPASS test is required, ACT test results may be used in place of the COMPASS test as long as the applicant has graduated from high school within the last two years.
3. Submit official college transcripts from any other institutions to the **Academic Records/Registrar's Office**. (It is the student's responsibility to review the evaluated transcript for accuracy before submitting the health application.)
4. Meet with an advisor to discuss all course and GPA requirements.
5. Complete all program-specific tour, volunteer or testing requirements. Submit the appropriate form to the **Academic Records/Registrar's Office**.

Information on program-specific requirements and deadlines can be obtained by contacting the **Office of Admissions/Student Services** for a health application packet.

Applicants for the nursing LPN to RN option are accepted on a selective basis. Any applicant who is not accepted in a given year must reapply the next year to be considered. Applications to this program are available on April 1 at the **Office of Admissions/Student Services**. The applicant should submit the application to the **Academic Records/Registrar's Office** as soon as possible after that date. However, the application will not be considered complete until all requirements are complete.

Applicants are accepted to the other health technologies on a rolling admissions (first come, first placed) basis. Once a class is full for a particular year, valid applications are accepted for the next year. These applications are available in the **Office of Admissions/Student Services**, but should not be submitted to the **Academic Records/Registrar's Office** until all requirements are met. Please see the appropriate application packet for details about requirements.

Admission to a health technology involves expenses beyond tuition and books. Students are responsible for expenses incurred for program and health requirements. These expenses may range from approximately $100 to $900. The **Office of Admissions/Student Services** can provide more specific information. Expenses for dental hygiene exceed this range due to the clinical component of the program.

Practice in various health professions requires specific physical skills and abilities. Questions about the competencies required of health technology applicants should be discussed with an admissions counselor.

According to various sections of the *Ohio Law and Regulations for Certification and Licensure Boards*, persons convicted of a felony or misdemeanor may not be able to take the licensure or certification examinations; may be refused acceptance of placement by the clinical/practicum sites; or may have restrictions placed on their ability to practice. For more information, contact the dean of student services and the applicable licensure/certification board.

Stark State College is committed to the principle of equal opportunity and does not discriminate on the basis of race, religion, national origin, gender, sexual orientation, age or disability. The College's equal opportunity guidelines apply to admission to all health technology programs. The College strives to assure a diverse representation of students within the health technology programs. Members of minority groups are encouraged to apply.

Specific information about application requirements for health technologies can be obtained from the **Office of Admissions/Student Services** at 330-966-5450 or 1-800-797-8275.

Dental Hygiene Program

Dental hygienists are important members of the dental health care team who are licensed to work with dentists in the delivery of dental care. Hygienists combine knowledge and clinical skills to plan and provide dental hygiene care for patients. They use interpersonal skills to motivate and instruct individual patients and community groups on methods to prevent oral disease and to maintain oral health.

The profession welcomes men and women of all ages and offers career opportunities with excellent income and scheduling flexibility. While most dental hygienists work in general or specialty dental offices and clinics, alternative opportunities include public health departments, nursing homes, school systems, private industry, academic institutions and dental sales manufacturers.

Stark State's program consists of one semester of eligibility (pre-application) courses and four semesters plus one summer session of academic coursework and hands-on learning experiences in the classroom, laboratory, clinic and community. An important feature of the program is the on-campus Dental Hygiene Clinic which is open to the public. The hundreds of hours of supervised patient care experiences provide excellent skill and professional development training.

Enrollment in the program is limited. Admission is offered to eligible applicants on a space-available basis. The dental hygiene program requires a separate application; admission to Stark State does not automatically mean acceptance into the dental hygiene program. Applicants must meet specific eligibility criteria, as described in program informational materials. Applicants must meet the following eligibility requirements:

- Be a high school graduate or have a GED certificate.
- Complete SSCT's Compass Assessment Test and take any courses recommended as a result of the test.
- Complete four eligibility (pre-application) courses – ENG124, PSY121, CHM121, BIO121 and their prerequisites according to the eligibility rules regarding minimum grade, age of course, and number of repeats/drops.
- Achieve a GPA of at least a 2.75 for the four eligibility courses.
- Maintain an overall college GPA of at least 2.00.
- Score at the 60th percentile or above on the PAX test.
- Complete the dental office observation experience requirement.
- Complete specified supplemental requirements.

Specific physical requirements are necessary to perform dental hygiene functions. Details are provided in program information materials or may be obtained from the dean of student services.

The goal of Stark State's program is to prepare students to demonstrate knowledge and competencies essential for the delivery of dental hygiene services and to enable them to assume the responsibilities for providing patient care. Graduates will understand the role of the dental hygienist and of other dental health team members; will be prepared to adapt to changing demands of the oral health care profession; and will seek opportunities for continuous professional development.

Graduates are eligible to take the Dental Hygiene National Board and Northeast Regional Board examinations, both of which are required for licensure in Ohio. Licensure is mandatory for employment in Ohio as a dental hygienist. Other states may have different licensing requirements.

According to Section 4715.21 of the Ohio Revised Code, applicants for licensure must submit to an FBI background check.

Dental hygiene applicants/students are responsible for informing the program director of any misdemeanor or felony convictions so that they may be informed of the steps the Ohio State Dental Board will take before considering their application for licensure.

The dental hygiene program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body of the American Dental Association, recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653; at 211 East Chicago Avenue, Chicago, IL 60611; www.ada.org.

The Stark State College Dental Hygiene Program has the following written articulation agreement for a bachelor in science degree completion program with:

Ohio State University, Dental Hygiene Program, Section of Primary Care, College of Dentistry

According to various sections of the Ohio Law and Regulations for Certification and Licensure Boards, persons convicted of any felony or a misdemeanor may not be able to take the licensure or certification examinations; may be refused acceptance of placement by the clinical/practicum sites; or may have restrictions placed on their ability to practice. For more information, contact the dean of student services and the applicable licensure/certification board.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

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Dental Hygiene Program

SUGGESTED COURSE SEQUENCE

Eligibility Courses		Credit Hours
CHM121	General Chemistry	4
BIO121	Anatomy and Physiology I	4
ENG124	College Composition †	3
PSY121	General Psychology	3
		14
Semester I		
DHY121	Head, Neck and Oral Anatomy	2
DHY122	Oral Histology and Embryology	1
DHY123	Dental Radiography	3
DHY131	Fundamentals of Dental Hygiene Practice	4
BIO122	Anatomy and Physiology II	4
		14
Semester II		
DHY124	Periodontics I	1
DHY125	Dental Materials	3
DHY126	Pathology	2
DHY132	Dental Hygiene Theory I	2
DHY133	Clinical Dental Hygiene I	2
BIO221	Principles of Microbiology**	4
		14
Summer		
DHY134	Clinical Dental Hygiene IA	1
DHY127	Community Oral Health I	1
DHY221	Nutrition in Dentistry	1
		3
Semester III		
DHY222	Dental Pharmacology	2
DHY223	Community Oral Health II	1
DHY225	Anesthesia and Pain Control	2
DHY231	Dental Hygiene Theory II	2
DHY232	Clinical Dental Hygiene II	4
SOC121	Sociology	3
		14
Semester IV		
DHY224	Periodontics II	1
DHY233	Dental Hygiene Theory III	2
DHY234	Clinical Dental Hygiene III	5
COM121	Effective Speaking	3
	Social Sciences Elective*	3
		14

73 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select any PSY/SOC course of three credit hours or more, SWK127 or PHL122.
** May not be taken earlier than three years prior to enrollment in DHY121.

A COLLEGE TECH PREP PARTICIPANT

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

In order to keep pace with progress, the College reserves the right to change fees, academic programs, course descriptions, or any other statements, contained in this catalog at the discretion of the College or its Board of Trustees. Please refer to www.starkstate.edu for the most current information.

Emergency Fire Services

The fire service is a noble and gratifying career. Firefighters are called upon to respond to many different situations. The main goals of a firefighter are to save life, protect property, to render humanitarian and special services, and to safeguard the environment. On any given day a firefighter may be called upon to respond to structural fires, car fires, animal rescues, brush fires, childbirth, hazardous materials incidents, water rescue, and more. Firefighters are confronted with challenging situations and must act quickly and decisively to mitigate these incidents to protect the public and themselves from harm. Firefighters are held in high regard by the public they serve. Today's firefighters are cross trained to also serve as paramedics. A firefighter/paramedic is ready to serve the public at all levels of emergency response.

Stark State College offers a two-year associate in applied science degree of emergency fire services technology. The level I and II firefighter certification course, EMT-Basic, and paramedic certification courses are included within this degree pathway, as well as courses designed to enhance the skills necessary to function as a firefighter/paramedic. The associate degree of emergency fire services will provide the initial knowledge and skills necessary for this profession.

SUGGESTED COURSE SEQUENCE

		Credit Hours
NOTE: ***The following two courses must be taken prior to Semester I***		
EMS121	Emergency Medical Technician - Basic*	5
BIO101	Introduction to Anatomy and Physiology**	3
		8
Semester I		
EMS122	Paramedic I/Seminar	10
ENG124	College Composition †	3
		13
Semester II		
EMS221	Paramedic II/Seminar	10
EMS222	Paramedic III/Seminar	4
MTH101	Introduction to Algebra	4
PSY121	General Psychology	3
		21
Semester III		
FST228	Firefighter I and II***	10
BCA120	Business Computer Applications	4
		14
Semester IV		
FST226	Line Officer Leadership	3
COM121	Effective Speaking	3
PHY101	Principles of Physics	4
FST225	Hazardous Materials	3
		13

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* EMS121 must be completed prior to applying to the paramedic program.
** BIO127 may be substituted for BIO101. ***(You must complete either BIO101 or BIO127 in order to enroll in EMS122.)***
*** See emergency fire services coordinator for options regarding this course.

According to various sections of the Ohio Law and Regulations for Certification and Licensure Boards, persons convicted of any felony will not be accepted into the emergency fire services and the emergency medical services programs at Stark State College. Persons convicted of a misdemeanor may not be accepted into the emergency fire services and emergency medical services programs at Stark State College. For more information, contact the dean of student services and the applicable licensure/certification board

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Emergency Medical Services

Paramedics are highly regarded health professionals. Public awareness has increased due to television and public events.

The world of emergency medical services (EMS) is very dynamic, changing and evolving continually. Paramedics have many new challenges in the care of the ill and injured requiring a higher standard of learning, particularly with interests of national security. The field of paramedicine is evolving to new areas beyond emergency care in the streets.

Stark State College offers a two-year associate in applied science degree of emergency medical services technology. The EMT-basic and paramedic certification courses are included within this degree pathway, as well as courses designed to enhance management skills in the healthcare industry. The EMS associate degree will provide the initial knowledge and skills necessary for this profession.

SUGGESTED COURSE SEQUENCE

NOTE: *The following two courses must be taken prior to Semester I (Paramedic I)*		Credit Hours
EMS121	Emergency Medical Technician - Basic*	5
BIO101	Introduction to Anatomy and Physiology**	3
		8
Semester I		
EMS122	Paramedic I/Seminar	10
ENG124	College Composition †	3
		13
Semester II		
EMS221	Paramedic II/Seminar	10
EMS222	Paramedic III/Seminar	4
MTH101	Introduction to Algebra	4
FST224	Legal Aspects	2
		20
Semester III		
BCA120	Business Computer Applications	4
PHY101	Principles of Physics	4
PSY121	General Psychology	3
HIT230	Health Care Delivery in the US	2
		13
Semester IV		
OTA223	Life Span Development	5
FST225	Hazardous Materials	3
BUS121	Business Administration	4
COM121	Effective Speaking	3
		15

69 TOTAL CREDIT HOURS

EMT-Paramedic One-year Certificate

SUGGESTED COURSE SEQUENCE

NOTE: *The following two courses must be taken prior to Semester I (Paramedic I)*		Credit Hours
EMS121	Emergency Medical Technician -Basic*	5
BIO101	Introduction to Anatomy and Physiology**	3
		8
Semester I		
EMS122	Paramedic I	10
		10
Semester II		
EMS221	Paramedic II	10
EMS222	Paramedic III	4
ENG124	College Composition †	3
		17

35 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* EMS121 is a pre-requisite for EMS122. A student can waive this course by showing proof of current State of Ohio Certification.
** BIO127 may be substituted for BIO101.
(You must complete either BIO101 or BIO127 prior to Paramedic I.)

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Emergency Medical Services

Certifications

The emergency medical technician (EMT) is an integral part of the healthcare system in today's society, providing emergency medical services (EMS) in a wide variety of situations in the pre-hospital setting. EMT-basics, intermediates and paramedics are an extension of the emergency department and have received increasing attention and public awareness due to television and public events.

Stark State College offers emergency medical services training including EMT-basic and paramedic. First responder and intermediate certification courses, while not routinely scheduled may be available.

The EMT curricula follow the National Department of Transportation and Ohio Objectives. Successful completion of the certification courses will allow a student to take the *National Registry Certification Exam*, which is required by the state of Ohio for certification as an EMT at any level. The EMS Courses consist of classroom and lab sessions, including hands-on training in an ambulance on campus. Additionally, training in various hospitals and infield internship with fire departments and EMS squads is required.

Critical thinking and physical agility are among the skills required to function as an EMT. Emergency services are highly regarded and respected by our community and throughout the country. A graduate of Stark State College's EMS training will find their career to be very challenging and rewarding.

EMT-Basic Certification
ADMISSION REQUIREMENTS

- Age 17 or in the last year of high school, OR 18 and out of high school
- Proof of proficiency in reading English as demonstrated on SSCT COMPASS test
- Meet admission requirements as set forth in OAC 4765-8-01

EMT-Paramedic
ADMISSION REQUIREMENTS

- Current EMT-basic certification in the State of Ohio
- Current healthcare provider basic life support certification
- Meet admission requirements as set forth in OAC 4765-8-01

Credit for Fire/EMS

General information guidelines for students with current Fire, EMT-B or EMT-P certification in the emergency fire/EMS two year associate degrees:

Students who are currently certified in any or all of the following can receive credit for these courses provided they meet all the requirements for graduation. Students must submit a written request to the department chair of emergency services prior to this process.

Courses: Firefighter Level 1 & 2 – 10 credits
EMT-B - 5 credits
EMT-P - 24 credits

Students must complete the following requirements at Stark State College:
- a minimum of 15 general credit hours
- a minimum of 5 technical credit hours
- submit current copies of certifications in the technical areas in which they are seeking credit

The specific areas of credit courses available in the technical portions of these two degrees are as follows:

Emergency Fire Services Degree:

Firefighter Level 1&2 (FST228), Line Officer Leadership (FST226), Hazardous Materials/WMD (FST225), EMT-B (EMS121), and Paramedic (EMS122), (EMS221), (EMS222)

Emergency Medical Services Degree:

EMT-B (EMS121), Paramedic (EMS122), (EMS221), (EMS222), (Legal Aspects (FST224), Hazardous Materials/WMD (FST225)

These credits will be posted when all the requirements of attaining the degree(s) have been met and verified by the department chair of emergency services. A list of alternative technical courses will be provided to any student required to enroll in a technical credit course in order to meet the five-hour minimum. Students may not post any failing grades in the major in which they are seeking an associate degree. Students must also maintain at least a 2.0 grade point average.

For additional information, contact the department chair of emergency services.

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Health Information Management Technology

Graduates of health information management technology associate degree programs are known as health information technicians or registered health information technicians (RHIT).

Health information technicians generally perform technical duties vital to the operation of a health information management department. These may include analysis of the medical record; collection and preparation of statistical data, coding and abstracting, quality improvement functions and supervision. One of the most important job functions is to protect the confidentiality of patient information and ensure the integrity of the medical record.

Health information technicians primarily are employed in hospitals, long-term care and outpatient facilities. The health information technician may have full responsibility for the operation of the medical record department or may specialize in a particular function such as medical coding. There has been an increase in jobs in places such as medical billing companies, physician group practices, health maintenance organizations and mental health and rehabilitation facilities. Other places of employment, depending on education, skills and interest, include consulting firms, software vendors, research facilities, information system departments and social service agencies.

Common job titles held by health information technicians in today's job market include: coder, medical record technician, registered health information technician, data analyst, etc. It is anticipated that job titles will change as health care enterprises expand their reliance on information systems and the electronic health record.

The health information management technology program at Stark State College is a four-semester course of study leading to an associate of applied science (A.A.S.) degree. A new group of students begins each year in the fall semester. The maximum number of students accepted is 24.

Graduates of the health information management technology program will be eligible to take the national accreditation examination administered by the American Health Information Management Association. Individuals who pass the examination are entitled to use the designation of registered health information technician (RHIT).

Prospective students in the health information management technology program must meet specific criteria as outlined in program preapplication requirements. Fulfilling the criteria does not guarantee admission to the program. You must apply and be accepted into the program to take HIT courses.

Graduates of the program may pursue a bachelor's degree in health information management (HIM) via distance learning at the University of Toledo or pursue other bachelor degree options.

The health information management technology program is accredited by the Commission on the Accreditation for Health Informatics and Information Management Education (CAHIIM).

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In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

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Health Information Management Technology

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
HIT121	Health Data Management and Delivery Systems	4
BIO125	Medical Terminology	3
HIT123	Healthcare Legal and Ethical Issues	2
BIO123	Principles of Human Structure and Function	5
BCA120	Business Computer Applications	4
		18
Semester II		
HIT124	Clinical Classification Systems I	4
HIT122	Alternative Health Records and Registries	3
BIO222	Pharmacology	3
BIO124	Pathophysiology	3
ENG124	College Composition †	3
		16
Summer		
	Communication Elective *	3
	Social Science Elective **	3
		6
Semester III		
HIT221	Clinical Classification Systems II	3
HIT222	Healthcare Statistics and Research	3
HIT224	Quality Management in Healthcare	2
HIT226	Professional Practice I/Seminar I	4
		12
Semester IV		
ENG222	Medical Technology Report Writing***	3
HIT223	HIM Supervision Concepts and Practices	3
HIT228	Clinical Classification Systems III and Reimbursement	4
HIT229	Health Information Systems and Technology	3
HIT227	Professional Practice II/Seminar II	4
		17

69 SEMESTER CREDITS

† Based on COMPASS or ACT placement scores.
* May select from communication (COM) offerings.
** May select from psychology (PSY) or sociology (SOC) offerings.
*** ENG222 must be taken concurrently with HIT223.

A COLLEGE TECH PREP PARTICIPANT

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Massage Therapy Program

Massage therapy is a study of the interrelationship of body, mind and spirit. Massage therapists apply specific techniques to the muscular structures and soft tissues of the human body effectively relieving pain and restoring function. Professional massage therapists are an integral part of a health care team and recognized for their important role in helping to treat illness and chronic ailments.

Stark State College offers two approaches to training as a massage therapist. The certificate program enables students to complete the 42 credit hour coursework in four semesters. Upon successful completion, students are issued a certificate which allows them to sit for licensure with the State of Ohio Medical Board. The associate of technical studies degree in massage therapy can be completed in five semesters and includes business and other courses which prepare students for success in their profession.

Massage Therapists in Ohio are required to be licensed. The State of Ohio Medical Board approves the curriculum at Stark State College and is the licensing agent for massage therapy. Therapists are licensed as limited medical practitioners and are able to work in private practice as well as hospitals, clinics, spas, doctor and chiropractor offices and in many other venues.

The massage therapy program at Stark State College challenges the student in proficiency of hands-on skills as well as extensive knowledge of anatomy, physiology and massage therapy theory. Self-care for the massage practitioner, client wellness education and community involvement through volunteerism is also an integral part of the curriculum.

Massage therapists benefit from knowing that they make a difference in the lives of others, enjoy a high level of autonomy in their employment and ample time with clients to convey a sense of caring which facilitates a healing environment.

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Massage Therapy Certificate Program

Program Beginning in Fall

		Credit Hours
Fall – Semester I		
MAS121	Massage Therapy I	6
BIO121	Anatomy and Physiology I	4
MAS123	Massage Therapy Anatomy and Physiology I – *Web Delivered*	1
PSY222	Psychological Aspects of Therapy	3
		14
Spring – Semester II		
MAS122	Massage Therapy II	2
MAS224	Massage Therapy III	4
BIO122	Anatomy and Physiology II	4
MAS124	Massage Therapy Anatomy and Physiology II – *Web Delivered*	2
		12
Summer – Semester III		
MAS225	Massage Therapy IV	2
MAS228	Professional Practice and Evaluation	1
BIO124	Pathophysiology	3
		6
Fall – Semester IV		
MAS226	Massage Therapy V	3
MAS223	Massage Therapy Review	3
MAS227	Massage Therapy Procedures	2
MAS229	Clinic Operations	2
		10

42 TOTAL CREDIT HOURS

Program Beginning in Spring

		Credit Hours
Spring – Semester I		
MAS121	Massage Therapy I	6
BIO121	Anatomy and Physiology I	4
MAS123	Massage Therapy Anatomy and Physiology I – *Web Delivered*	1
PSY222	Psychological Aspects of Therapy	3
		14
Summer – Semester II		
MAS122	Massage Therapy II	2
		2
Fall – Semester III		
MAS224	Massage Therapy III	4
MAS225	Massage Therapy IV	2
BIO122	Anatomy and Physiology II	4
MAS124	Massage Therapy Anatomy and Physiology II – *Web Delivered*	2
MAS228	Professional Practice and Evaluation	1
		13
Spring – Semester IV		
MAS226	Massage Therapy V	3
MAS223	Massage Therapy Review	3
MAS227	Massage Therapy Procedures	2
MAS229	Clinic Operations	2
BIO124	Pathophysiology	3
		13

42 TOTAL CREDIT HOURS

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Massage Therapy Program

Associate of Technical Studies Massage Therapy Major

Program Beginning in Fall

		Credit Hours
Fall – Semester I		
MAS121	Massage Therapy I	6
BIO121	Anatomy and Physiology I	4
MAS123	Massage Therapy Anatomy and Physiology I - *Web Delivered*	1
BUS121	Business Administration	4
ENG124	College Composition †	3
		18
Spring – Semester II		
MAS122	Massage Therapy II	2
MAS224	Massage Therapy III	4
MAS124	Massage Therapy Anatomy and Physiology II – *Web Delivered*	2
PSY222	Psychological Aspects of Therapy	3
BIO122	Anatomy and Physiology II	4
		15
Summer – Semester III		
MAS225	Massage Therapy IV	2
MAS228	Professional Practice and Evaluation	1
BIO125	Medical Terminology	3
BIO124	Pathophysiology	3
		9
Fall – Semester IV		
MAS226	Massage Therapy V	3
MAS223	Massage Therapy Review	3
BUS123	Business Math	4
MAS227	Massage Therapy Procedures	2
MAS229	Clinic Operations	2
		14
Spring – Semester V		
MKT121	Principles of Marketing	3
ACC121	Principles of Accounting	4
BCA120	Business Computer Applications	4
MGT121	Principles of Management	3
		14

70 TOTAL CREDIT HOURS

† Based on SSCT placement scores.

Program Beginning in Spring

		Credit Hours
Spring – Semester I		
MAS121	Massage Therapy I	6
BIO121	Anatomy and Physiology I	4
MAS123	Massage Therapy Anatomy and Physiology I – *Web Delivered*	1
BUS121	Business Administration	4
BUS123	Business Math	4
		19
Summer – Semester II		
MAS122	Massage Therapy II	2
BCA120	Business Computer Applications	4
ENG124	College Composition †	3
BIO125	Medical Terminology	3
		12
Fall – Semester III		
MAS224	Massage Therapy III	4
MAS225	Massage Therapy IV	2
BIO122	Anatomy and Physiology II	4
MAS124	Massage Therapy Anatomy and Physiology II – *Web Delivered*	2
PSY222	Psychological Aspects of Therapy	3
MAS227	Massage Therapy Procedures	2
MAS228	Professional Practice & Evaluation	1
		18
Spring – Semester IV		
MAS226	Massage Therapy V	3
MAS223	Massage Therapy Review	3
BIO124	Pathophysiology	3
MAS229	Clinic Operations	2
		11
Summer – Semester V		
MKT121	Principles of Marketing	3
MGT121	Principles of Management	3
ACC121	Principles of Accounting	4
		10

70 TOTAL CREDIT HOURS

† Based on SSCT placement scores.

A COLLEGE TECH PREP PARTICIPANT

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Medical Assisting Program

Medical assisting is projected to be one of the fastest growing occupations over the 2004-14 period according to the *Occupational Outlook Handbook* published by the U.S. Department of Labor.

The medical assisting program offers a five-semester "day track" program and a "night track" program to accommodate students who work during the day. Students are encouraged to complete general studies courses while waiting to become eligible for admission to the program.

WHAT IS MEDICAL ASSISTING?

Medical assistants are medical office experts. They do not administer skilled, bedside nursing care. These skills are performed by the registered and practical nurse in a hospital or skilled nursing facility.

The medical assistant is a multi-competent professional who works in doctors' offices, outpatient and ambulatory care clinics, and other health-related businesses. The medical assistant frequently functions as the physician's right hand, assisting with the instruction and treatment of patients and performing the administrative tasks needed to keep an office running smoothly. The medical assistant is skilled in human relations techniques and is required to deal effectively with patients and other allied health personnel in the health care delivery system.

Clinical skills include assisting with the physical exam, measuring vital signs, height, weight, visual acuity and hearing levels. The medical assistant gives injections, applies bandages and dressings, and instructs patients in diet and at-home treatments. Medical assistants perform laboratory screening tests and EKGs, and assist with x-rays. Medical assistants clean and sterilize instruments and assist with minor office surgery and therapeutic treatments ordered by the physician.

Medical assistants must have administrative skills to keep an office running smoothly. Among these skills are: typing, word processing, insurance coding, transcribing from dictation, computer office systems, accounting, office procedures and communication/telephone skills.

Immediately upon graduation, a medical assisting graduate is eligible to take the national certification exam given by the AAMA (American Association of Medical Assistants) to become a certified medical assistant (CMA).

Second-year students are offered electives in advanced phlebotomy and ophthalmology to assist them in becoming eligible to sit for two additional national certification exams: certified phlebotomist (CLPlb) and certified ophthalmic assistant (COA).

The medical assisting program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants' Endowment (CRB-AAMAE).

Medical assisting ophthalmology technical electives are accredited by The Committee on Accreditation for Ophthalmic Medical Personnel (CoA-OMP) a sponsor committee on Accreditation of the CAAHEP system.

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Important note:
Effective with the January 2001 *Certification Examination,* felons are not eligible to sit for the examination unless the Certifying Board (CB) grants a waiver based on one or more of the mitigating circumstances listed in the *Disciplinary Standards.*

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Medical Assisting Program

Day Track

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BIO101	Introduction to Anatomy and Physiology	3
BIO125	Medical Terminology	3
IDS115	Master Student	3
MAT121	Medical Assisting I	4
OAD107	Digital Technologies *(8 wks)*	1
OAD108	MS Outlook *(8 wks)*	1
		15
Semester II		
MAT122	Medical Assisting II	4
MAT124	Medical Office Procedures I	3
MTH101	Introduction to Algebra (*or test out)*	4
BCA120	Business Computer Applications*	4
PSY121	General Psychology	3
		14-18
Summer		
ENG124	College Composition †	3
PSY123	Human Growth and Development	3
COM121	Effective Speaking	3
		9
Semester III		
MAT221	Medical Laboratory Procedures	3
MAT222	Insurance for Medical Assisting	4
MAT223	Medical Office Procedures II	4
MAT224	Pharmacology/Administration of Medications	4
	Social Sciences Elective or Technical Elective**	3
		15-18
Semester IV		
MAT123	Medical Assisting III	2
MAT225	Emergency Medical Procedures	2
MAT226	Medical Office Management/Law	3
MAT227	Medical Assisting Externship	2
MAT233	Seminar	1
	Social Sciences Elective or Technical Elective**	3
		10-13

70 TOTAL CREDIT HOURS

Night Track ▲

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BIO101	Introduction to Anatomy and Physiology	3
BIO125	Medical Terminology	3
IDS115	Master Student	3
MAT121	Medical Assisting I	4
OAD107	Digital Technologies *(8 wks)*	1
OAD108	MS Outlook *(8 wks)*	1
		15
Semester II		
MAT122	Medical Assisting II	4
MAT124	Medical Office Procedures I	3
MTH101	Introduction to Algebra (*or test out)*	4
BCA120	Business Computer Applications*	4
		11-15
Summer		
ENG124	College Composition †	3
PSY123	Human Growth and Development	3
COM121	Effective Speaking	3
		9
Semester III		
MAT221	Medical Laboratory Procedures	3
MAT222	Insurance for Medical Assisting	4
MAT223	Medical Office Procedures II	4
PSY121	General Psychology	3
	Social Sciences Elective or Technical Elective**	3
		14-17
Semester IV		
MAT123	Medical Assisting III	2
MAT225	Emergency Medical Procedures	2
MAT226	Medical Office Management/Law	3
MAT224	Pharmacology/Administration of Medications	4
MAT227	Medical Assisting Externship	2
MAT233	Seminar	1
	Social Sciences Elective or Technical Elective**	3
		14-17

70 TOTAL CREDIT HOURS

† Based on SSCT placement scores.

* Based on work or educational experience (see administrative information proficiency exam schedule).

** A minimum of three credit hour of medical assisting technical electives or social science electives is required for graduation and may be taken during Semester III or Semester IV. Each of the following courses is a three-credit hour elective: MAT228, MAT229, MAT230.

▲ Medical assisting night track program is designed for working students who are able to complete some or all general studies courses on a part-time basis prior to applying for admission to the program.

Note: Students who are not proficient in keyboarding and data input are strongly advised to take OAD101 (Keyboarding and Data Input Methods) before entering the program.

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FRANKLIN UNIVERSITY

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Medical Coding Certificate Program

One-Year Certificate Program - Night Track

Continually changing regulations for reimbursement of health care services issued by the government and other third-party payers have created a demand for qualified medical coders. A medical coder is a valuable member of the health information team who is responsible for translating diagnostic and procedural phrases into coded form. The coded information is then utilized for reimbursement purposes, analysis of patient outcomes and research.

Opportunities for employment include all types of health care environments such as hospitals, outpatient facilities, physicians facilities, physician offices, medical/billing companies, insurance companies, etc.

Students will be instructed in ICD-9-CM, CPT-4, DRGs, APCs and other third party reimbursement methodologies. A thorough understanding of coding guidelines, anatomy and physiology and disease processes are required in order to understand the disease and procedures to be coded. The medical coder must also have a thorough understanding of the content of the medical record, legal and ethical issues, and information systems.

Students who complete the medical coding certificate program are eligible to sit for coding certification examinations. The program recommends the CCA exam (Certified Coding Associate). See the American Health Information Management Association Web site ***www.ahima.org*** for additional information regarding coding certification exams.

The medical coding certificate program is a ***night track only***, 37-credit course of study that will prepare students for entry-level employment as medical coders. A new group of students begins each fall semester. The summer semester courses are very accelerated and the schedule is rigorous. The maximum number of students accepted is 24. Prospective students in the medical coding certificate program must meet criteria as outlined in program preapplication requirements. Fulfilling the criteria does not guarantee admission to the program. You must apply and be accepted into the program to take HIT courses.

The medical coding certificate program has been approved by the Ohio Board of Regents.

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SUGGESTED COURSE SEQUENCE

		Credit Hours
Fall – Semester I		
HIT121	Health Data Management and Delivery Systems	4
BIO125	Medical Terminology	3
HIT123	Healthcare Legal and Ethical Issues	2
BIO123	Principles of Human Structure and Function	5
		14
Spring – Semester II		
BIO124	Pathophysiology	3
BCA120	Business Computer Applications	4
BIO222	Pharmacology	3
HIT124	Clinical Classification Systems I	4
		14
Summer – Semester III		
HIT221	Clinical Classification Systems II	3
HIT228	Clinical Classification Systems III and Reimbursement	4
HIT231	Coding Professional Practice Experience/ Seminar†	2
		9

37 TOTAL CREDIT HOURS

† The coding professional practice experience is daytime only.

Note: All credits obtained in the medical coding certificate program can be applied to an associate of applied science degree in health information management technology. Entry is based upon seat availability.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Medical Instrument Sterilization

Medical instrument sterilization technology is responsible for the correct decontamination processing and sterilization of all items in the hospital and/or clinic that require sterilization. The students in this program work in the central service area and are trained in principles, methods and control of the sterilization processes, cleaning, processing, packaging, distributing, storing and inventory control of sterile goods, instruments, trays, and equipment in the hospital/clinical setting.

The medical instrument sterilization technology program prepares students for professional careers as technicians employed by hospitals and medical clinics to sterilize and clean medical instruments used in surgical procedures and treatment of patients.

Graduates will be eligible to sit for the examination required to become a Certified Sterile Processing and Distribution Technician (CSPDT) after successful completion of the certificate program. Students who complete additional coursework and two additional semesters of study earn an associate of technical studies degree with a major in medical instrumentation sterilization technology.

The program is offered through a collaborative effort between Stark State College of Technology and Mercy Medical Center. Three of the four medical instrument sterilization courses are taught at Mercy Medical Center.

Requirements for admission into the program:

- complete the College admissions process
- submit a health program application to Academic Records/Registrar's Office
- college and high school transcripts provided and evaluated
- minimum GPA 2.0 overall preferred
- successful completion of College Mathematics or proficiency

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Medical Instrument Sterilization Certificate Program

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
MIS121	Medical Instrument Sterilization I/Seminar	4
BIO101	Introduction to Anatomy and Physiology	3
IDS115	Master Student	3
BIO125	Medical Terminology	3
		13
Semester II		
MIS122	Medical Instrument Sterilization II/Seminar	6
ENG124	College Composition †	3
MIS123	Introduction to Surgical Terminology/Microbiology	3
		12
Semester III (Summer)		
MIS221	Medical Instrument Sterilization III/Seminar	6
		6

31 TOTAL CREDIT HOURS

† Based on SSCT placement score.

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Medical Instrument Sterilization

Associate of Technical Studies Medical Instrument Sterilization Major

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
MIS121	Medical Instrument Sterilization I/Seminar	4
BIO101	Introduction to Anatomy and Physiology	3
IDS115	Master Student	3
BIO125	Medical Terminology	3
		13
Semester II		
MIS122	Medical Instrument Sterilization II/Seminar	6
ENG124	College Composition †	3
MIS123	Introduction to Surgical Terminology/Microbiology	3
BIO123	Principles of Human Structure and Function	5
		17
Semester III (Summer)		
MIS221	Medical Instrument Sterilization III/Seminar	6
		6
Semester IV		
BCA120	Business Computer Application	4
COM122	Communication Theory	3
PSY121	General Psychology	3
BIO124	Pathophysiology	3
		13
Semester V		
COM121	Effective Speaking	3
	Elective (Arts, Humanities, Social Studies)*	3
BIO221	Principles of Microbiology	4
SOC121	Sociology	3
		13

62 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* An elective of at least 3 semester credit hours in the areas of arts, humanities or social studies must be completed

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Medical Laboratory Technology

Laboratory tests play an important part in the detection, diagnosis and treatment of many diseases. Medical laboratory technicians perform a wide variety of tests and laboratory procedures that require a high level of skill.

The medical laboratory technician analyzes the blood, tissues and fluids in the human body by using precision instruments such as microscopes and automated analyzers. Technicians assist in performing complicated chemical, microscopic and bacteriological tests including: blood cholesterol level; microscopic examination of the blood to detect the presence of diseases; and cultures of body fluid or tissue samples to determine the presence of bacteria, parasites or other microorganisms. Technicians may also type and crossmatch blood samples. Collection of blood samples by venipuncture and skin puncture is a required skill of medical technicians.

Technicians employed in small laboratories often perform a variety of tests, while those in large laboratories may specialize in areas such as microbiology, parasitology, clinical chemistry, blood banking and hematology. Medical laboratory technicians are valued members of the health team. Graduates of the program are eligible to take the national certification exams given by the ASCP and NCA.

Applicants should review the program essential functions to determine if they meet these requirements, available from the program director.

The medical laboratory technology program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), which is sponsored by the American Society of Clinical Pathologists and the American Society (ASCLS) of Clinical Laboratory Scientists. NAACLS can be reached at 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415 • 773-714-8880 • *www.naacls.org*.

According to various sections of the Ohio Law and Regulations for Certification and Licensure Boards, persons convicted of any felony or a misdemeanor related may not be accepted into a health program at Stark State College; may not be able to take the licensure or certification examinations; may be refused acceptance of placement by the clinical/practicum sites; or may have restrictions placed on their ability to practice. For more information, contact the dean of student services and the applicable licensure/certification board.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
MLT121	Fundamentals of Laboratory Techniques	3
MLT122	Urinalysis	2
CHM121	General Chemistry	4
BIO123	Principles of Human Structure and Function***	5
MLT123	Hematology I	3
		17
Semester II		
MTH123	Intermediate Algebra*	3
MLT124	Hematology II	4
MLT125	Immunohematology	5
CHM122	Organic and Biological Chemistry	4
ENG124	College Composition †	3
		19
Interim Session		
MLT221	Immunology/Serology++	3
		3
Summer		
BIO221	Principles of Microbiology	4
	Elective****	1
	Elective****	1
		6
Semester III		
MLT222	Clinical Chemistry	5
MLT223	Clinical Microbiology	7
	Social Sciences Elective**	3
		15
Semester IV		
MLT224	Directed Practice/Seminar	10
		10

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.
++ Class begins last several weeks of spring semester and concludes before beginning of summer semester.
* May substitute MTH121.
** May select from sociology and psychology offerings.
*** BIO121, BIO122 may be substituted.
**** Suggest two of the following one-credit courses: Microsoft Word, Excel, PowerPoint or Access, or Health Care Delivery in the U.S., a two-credit hour course or another elective per an advisor.
Note: It is recommended that students take Algebra before taking Chemistry.

COLLEGE TECH PREP
A COLLEGE TECH PREP PARTICIPANT

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Medical Transcription Certificate Program

One-Year Certificate Program

Medical transcription is the art and science of producing a technically and grammatically correct typewritten report of the dictated word. Medical transcriptionists are medical language specialists who use headsets and transcribing/computer equipment to listen to recordings by physicians and other healthcare professionals. After reviewing and editing for grammar and clarity, the medical transcriptionist transcribes the dictated reports and returns them in either printed or electronic form to the dictator for review and signature or correction.

A medical transcriptionist's basic responsibility is to transcribe medical dictation into a complete and accurate report. Depending on the employment setting, the transcriptionist may also be responsible for carrying out other office duties.

To understand and accurately transcribe dictated reports, the medical transcriptionist must demonstrate an extensive knowledge of medical terminology, anatomy and physiology, pharmacology, human diseases, surgical procedures, diagnostic studies and laboratory tests. A medical transcriptionist must also be able to translate medical jargon and abbreviations into their expanded forms.

Characteristics needed to become a medical transcriptionist include: excellent English language and proofreading skills, a strong interest in medical language, good hearing acuity and listening ability, good keyboarding/typing skills, ability to sit and work for long hours, a high level of concentration for extended period of time and the ability to work independently.

Medical transcriptionists may be found in a variety of settings including the medical records department in a hospital, radiology/imaging departments, physician offices, outpatient facilities, outpatient surgery centers, government facilities, long term, mental health and social service facilities, medical transcription services and home offices. After gaining work experience, medical transcriptionists may work independently out of their homes or work at home as an employee of a hospital or transcription service.

According to the *Occupational Outlook Handbook*, demand for medical transcriptionists is expected to increase due to rapid growth in the healthcare industry spurred by a growing and aging population. Advancements in voice recognition technology are not projected to reduce the need for medical transcriptionists because these workers will continue to be needed to review and edit drafts of the medical report for accuracy.

Because of the nature of the program and the availability of resources and facilities, admission to the program is limited to a new class of 20 students each fall semester.

The program is a three-semester course of study combining classroom learning and practical experience leading to entry-level employment. At the end of the program, students who have successfully passed all the courses receive a certificate of completion. In addition, the student is earning college credits from an accredited institution, which may be applied to other courses of study in the future.

Prospective students in the medical transcription certificate program must meet criteria as outlined in program preapplication requirements. Fulfilling the criteria does not guarantee admission to the program. You must apply and be accepted into the program to take MTC courses.

The medical transcription certificate program has been approved by the Ohio Board of Regents.

According to various sections of the Ohio Law and Regulations for Certification and Licensure Boards, persons convicted of any felony or a misdemeanor may not be accepted into a health program at Stark State College; may not be able to take the licensure or certification examinations; may be refused acceptance of placement by the clinical/practicum sites; or may have restrictions placed on their ability to practice. For more information, contact the dean of student services and the applicable licensure/certification board.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BIO125	Medical Terminology	3
BIO123	Principles of Human Structure and Function	5
OAD121	Keyboarding/Formatting*	3
MTC121	Medical Transcription/Terminology I	5
		16
Semester II		
MTC122	Medical Transcription/Terminology II	5
OAD129	Keyboarding/Skillbuilding *(8 wks)*	1
ENG124	College Composition †	3
BIO124	Pathophysiology	3
		12
Summer		
BIO222	Pharmacology	3
MTC123	Advanced Medical Transcription	3
		6

34 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Recommend taking this course prior to beginning the program.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Associate Degree in Nursing (ADN) Program

Nursing is a rewarding profession that combines technology with caring to assist people in obtaining and maintaining optimal health.

The associate degree nurse (ADN) practices in a variety of settings: hospitals, long-term and extended-care facilities, clinics and other health care agencies. The ADN graduate functions in three primary roles: provider of client care, manager of client care and member within the nursing discipline.

Using the methodology of the nursing process, the associate degree nurse formulates clinical judgments, collaborates with clients and other health care professionals, and practices within legal, ethical and social obligations.

Stark State College's ADN program consists of four semesters and a summer of academic coursework and hands-on learning experiences in the classroom, learning laboratory and clinical settings. The program prepares the individual to qualify for the licensing examination for registered nurses.

Applicants must fulfill the following requirements to be eligible for admission to the ADN program:

- Be a high school graduate with a GPA of 3.0 or better on a 4.0 scale within the last five years; or have obtained a GED certificate within the last five years; or have a college GPA of 3.0 or better in 12 hours or more of course work. The SSCT transcript will take precedence once 12 or more credit hours have been completed at SSCT.
- Have completed one year of high school chemistry and biology with a grade of "C" or better within the past five years, or show equivalency. A high school course in Algebra is essential for those attempting to test out of Introduction to Algebra.
- Complete Stark State's pre-admission test and take any courses recommended as a result of that test.
- Score 60% or higher on the National League for Nursing pre-admission examination for registered nurses. See the Information Packet for Nursing regarding specific guidelines for achievement of grades in pre-nursing and non-nursing courses.

An evening/weekend program is currently being offered to students who meet the listed admission requirements as well as having completed the following courses:

- BIO121: Anatomy and Physiology I,
- BIO122: Anatomy and Physiology II,
- CHM121: General, Organic, and Biological Chemistry Part I, and
- CHM122: General, Organic, and Biological Chemistry Part II

with a grade of "C" or better by June 1 of the admitting year. Meeting requirements for admission for the evening/weekend program does not guarantee admission to the evening/weekend nursing program. This program covers the same sequence in the same time frame as the weekday program.

A licensed practical nurse (LPN) admitted to Stark State College's ADN program with advanced standing admission (ASA) obtains 77 semester hours of credit at graduation.

LPNs must earn 22 hours of credit in specified courses before admission to the program. Upon satisfactory completion of the ACE test with a decision score of 70 in both sections of the test, and satisfactory completion of *NUR 201: Transition for the LPN* (a five-credit hour course), LPNs will receive 20 hours of credit for first-level nursing courses. In addition, LPNs must complete the one-calendar-year curriculum plan RN completion for LPN sequence.

According to Section 4723.28 of the *Ohio Revised Code*, nursing students are responsible for informing the department chair/director of nursing, early and during the program, of any misdemeanor or felony convictions so that students may be informed of the steps the Ohio Board of Nursing will take before considering their application to sit for the licensing examination.

According to *Ohio HB327*: anyone previously convicted of, pleaded guilty to, or had a judicial finding of guilt for an egregious felony will be precluded from initial licensure. Egregious felonies are: aggravated murder, murder, voluntary manslaughter, felonious assault, kidnapping, rape, sexual battery, gross sexual imposition, aggravated arson, aggravated robbery and aggravated burglary.

Stark State College's associate degree of nursing (ADN) program has full approval by the Ohio Board of Nursing and is accredited by the National League for Nursing Accrediting Commission (NLNAC). NLNAC can be reached at: 61 Broadway, 33rd Floor, New York, NY 10006 • 1-800-669-1656.

Criminal Background checks will be required for all nursing students before beginning nursing courses and on an annual basis. Depending on the individual's criminal background, it may not be possible to provide required clinical placements.

Candidates who wish to sit for the NCLEX-RN (Registered Nurse Licensing Examination) will be required to submit their fingerprints to the Bureau of Criminal Identification and Investigation (BCII) and the Federal Bureau of Investigations (FBI).

For more details, contact the Ohio Board of Nursing Web site at *www5.state.oh.us/nur*

The Stark State College ADN program has the following written articulation agreements in place:

- Ashland University, Department of Nursing, Bachelor of Science in Nursing (BSN), RN-BSN completion onsite at SSCT.
- Malone College, Department of Nursing, Bachelor of Science in Nursing (BSN) degree-completion track for RNs (Canton, OH)
- Wayne College Joint Vocational High School nurse program and the Wayne Adult School of Practical Nursing (Smithville, OH)
- Portage Lakes Career Center, W. Howard Nicol School of Practical Nursing (Green, OH)
- Practical Nurse Program of Canton City Schools (Canton, OH)
- Robert T. White practical nurse program (Alliance, OH)
- Walsh University, B.S.N. Degree for the Registered Nurse (BSN-RN) Program (Canton, OH)

Transfer guidelines are available from the Admissions Department .

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

In order to keep pace with progress, the College reserves the right to change fees, academic programs, course descriptions, or any other statements, contained in this catalog at the discretion of the College or its Board of Trustees. Please refer to www.starkstate.edu for the most current information.

Associate Degree in Nursing (ADN) Program

SUGGESTED COURSE SEQUENCE

Semester I		Credit Hours
NUR121	Fundamental Concepts of Nursing	6
BIO121	Anatomy and Physiology I	4
PSY121	General Psychology	3
CHM121	General, Organic and Biological Chemistry Part I	4
		17
Semester II		
NUR221	Nursing Care of Persons with Alterations in Health I	6
BIO122	Anatomy and Physiology II	4
CHM122	General, Organic and Biological Chemistry Part II	4
ENG124	College Composition †	3
		17
Summer		
NUR122	Nursing Care of the Child-bearing Family	4
NUR123	Nursing Care of Children	4
PSY123	Human Growth and Development	3
		11
Semester III		
NUR222	Nursing Care of Persons with Alterations in Health II	8
BIO221	Principles of Microbiology	4
SOC121	Sociology	3
		15
Semester IV		
NUR223	Nursing Care of Persons with Alterations in Health III	8
NUR224	Nursing Seminar	1
ENG224	Composition and Literature	3
		12

72 TOTAL CREDIT HOURS

RN Completion for LPN

SUGGESTED COURSE SEQUENCE

Summer		Credit Hours
NUR201	Transition for the LPN	5
PSY123	Human Growth and Development	3
		8
Fall		
NUR222	Nursing Care of Persons with Alterations in Health II	8
BIO221	Principles of Microbiology	4
SOC121	Sociology	3
		15
Spring		
NUR223	Nursing Care of Persons with Alterations in Health III	8
NUR224	Nursing Seminar	1
ENG224	Composition and Literature	3
		12

35 TOTAL CREDIT HOURS

† Based on SSCT placement score.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Occupational Therapy Assistant (OTA) Technology

The profession of occupational therapy is concerned with providing services to individuals whose lives have been disrupted by accident or illness, birth defects, developmental problems, social or psychological problems. Occupational therapy personnel work in hospitals, schools, workshops, mental health centers, clinics and home-health agencies.

Occupational therapy assistants work under the supervision of the registered occupational therapist, helping patients achieve maximum independence in activities of daily living (ADL), instrumental activities of daily living, work, leisure and play, education and social participation.

Assistants help therapists in evaluating patients to determine patient and family needs. Once the therapist sets the treatment goals the assistants may be responsible for implementing therapy by using selected activities. Treatment may involve group activities such as role playing, games or work and discussion groups, or individual programs to help strengthen impaired muscles, to improve coordination or to compensate for perceptual problems. Assistants may also instruct and train patients in the use of specially designed devices to allow people with physical disabilities to dress or feed themselves, take care of their homes or return to work.

Coursework focuses on human development and the tasks and skills used in everyday life. Prospective students in the occupational therapy assistant technology program must have one year of high school biology or one semester of college anatomy and physiology and one year of high school algebra.

The occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, P.O. Box 31220 Bethesda, MD 20824-1220 • 301-652-2682. Graduates of the program will be eligible to sit for the *national certification examination* for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a certified occupational therapy assistant (COTA). In addition, most states require licensure in order to practice; however, states licenses are usually based on the results of the *NBCOT Certification Examination.*

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Occupational Therapy Assistant (OTA) Technology

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
BIO125	Medical Terminology	3
PSY121	General Psychology	3
ENG124	College Composition †	3
OTA121	Foundations of Occupational Therapy	3
OTA122	Therapeutic Media	3
		15
Semester II		
PSY221	Abnormal Psychology	3
COM122	Communication Theory	3
BIO123	Principles of Human Structure and Function*	5
OTA123	Psychosocial Aspects in Occupational Therapy	4
OTA124	Psychosocial Clinical Experience	3
		18
Semester III		
OTA223	Life Span Development	5
OTA221	Developmental Aspects in Occupational Therapy	4
OTA222	Developmental Clinical Experience	3
PTA226	Functional Anatomy	4
		16
Semester IV		
BIO124	Pathiophysiology	3
SOC121	Sociology	3
OTA224	OT Physical Dysfunction	4
OTA225	Physical Dysfunction Clinical Experience	3
		13
Semester V		
OTA226	OTA Seminar	2
OTA227	Clinical Application I *(8 wks)*	3
OTA228	Clinical Application II *(8 wks)*	3
		8

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* May substitute BIO123 with BIO121 and BIO122.

All OTA students must complete Level II fieldwork within six months following completion of academic courses.

According to various sections of the Ohio Revised Code especially sections 4755.01 to 4755.12 and according to the rules and regulations of the occupational therapy (OT) section of the Ohio Occupational Therapy, Physical Therapy and Athletic Trainers Board (OT/PT/AT Board) and of the National Board for Certification of Occupational Therapy (NBCOT), persons convicted of any misdemeanor related to weapon violence, sexual offences, alcohol/drugs or a felony may be denied certification or licensure or may be refused placement by the clinical experience sites or may have restrictions placed on their ability to practice. This may effect your admission into the OTA program. Such persons are advised to contact the director of OTAT, the OT section of the Ohio OT/PT/AT Board, and/or NBCOT.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Physical Therapist Assistant (PTA) Technology

Physical therapist assistants work under the supervision of physical therapists to rehabilitate ill or injured persons to the highest possible level of independent living. They also help to educate patients and other people about measures they can take to prevent disability from occurring or becoming worse.

Physical therapist assistants help therapists in testing patients to determine the extent of their capabilities. After the therapist sets goals and plans the treatment program for the patient, assistants may be assigned to perform selected treatments, using a variety of specialized equipment, various forms of heat, cold, light and electricity. Assistants may help patients perform therapeutic exercises to strengthen, stretch or relax muscles, promote circulation or enhance coordination.

Physical therapist assistants help patients learn correct walking procedures and perform everyday activities such as dressing, getting in and out of bed and chairs, using artificial limbs, braces and splints and standing properly. They also teach patients and family members about exercises or other activities to continue at home.

Assistants are responsible for reporting patient reactions to treatment and making suggestions for modifying treatment to their supervising therapist. They also help with documentation of patient progress, perform certain clerical duties and help give on-the-job training to non-licensed personnel working in the physical therapy department.

Upon successful completion of all didactic, laboratory and clinical requirements of the program, graduates become eligible to apply to take licensure examinations. The Ohio Occupational Therapy, Physical Therapy, Athletic Trainers Board must approve all applicants prior to obtaining licensure in the State of Ohio. Graduates must pass the Ohio Laws and Rules Examination and the National Physical Therapy Examination to be eligible to be licensed in Ohio. Licensure is mandatory prior to being able to practice as a physical therapist assistant in Ohio.

Prospective students in the physical therapist assistant technology (PTAT) must meet specific eligibility criteria as outlined in program prerequisite requirements.

The physical therapist assistant technology program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

Any persons convicted of a felony or misdemeanor (regardless of the state or country in which the conviction occurred) or abuse alcohol or a controlled substance to the extent that it impairs professional competency may be denied acceptance into the physical therapist assistant technology program at Stark State College of Technology, may be refused acceptance of placement by clinical sites (which could prevent graduation from the program) or may be refused licensure as a physical therapist assistant. Such persons are advised to contact the program coordinator of the physical therapist assistant technology program and the executive director of the Ohio Occupational Therapy, Physical Therapy, and Athletic Trainers Board.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Physical Therapist Assistant (PTA) Technology

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
PHY101	Principles of Physics	4
PTA121	Fundamentals of Physical Therapy	4
PTA122	Musculoskeletal Anatomy	4
BIO123	Principles of Human Structure and Function **	5
		17
Semester II		
BIO125	Medical Terminology	3
COM122	Communication Theory *	3
PTA123	Kinesiology	4
PTA221	PTA Procedures I	5
BIO124	Pathophysiology	3
		18
Semester III (Summer)		
PTA124	Measurement Procedures for the PTA	2
PSY121	General Psychology	3
ENG124	College Composition †	3
PTA125	Professional Clinical Practice for the PTA	1
		9
Semester IV		
PSY222	Psychological Aspects of Therapy	3
PTA222	PTA Procedures II	5
OTA223	Life Span Development	5
PTA229	Directed Practice I	3
PTA228	Seminar I	2
		18
Semester V		
PTA223	PTA Procedures III	2
PTA231	Directed Practice II	2
PTA230	Seminar II	1
PTA227	Directed Practice III	3
		8

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* COM121 may be substituted for this class.
** BIO121 and BIO122 may be substituted for this class.

This is a suggested course sequence. Only those marked PTA must be taken in this order. Course prerequisites stated in the catalog must be met.

A COLLEGE TECH PREP PARTICIPANT

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Respiratory Care Technology

Respiratory care is a healthcare specialty involved in the assessment, treatment, management, control, diagnostic evaluation and care of patients with deficiencies and abnormalities of the cardiopulmonary system.

Working under the direction of a physician, respiratory care practitioners perform specific therapeutic procedures in the newborn nursery, surgical and medical clinical areas, emergency rooms, outpatient departments and intensive-care units of hospitals. These procedures include the administration of medical gases, administration of breathing treatments and other bronchial-hygiene techniques. Respiratory therapy provides treatment for patients with acute illnesses who may require use of life-support equipment as well as the testing of patients using various diagnostic techniques.

Prospective students in the respiratory care technology program must meet specific eligibility criteria as outlined in the program's prerequisite requirements.

The respiratory care technology program provides opportunities for students to acquire the necessary skills by combining classroom learning with hospital experience. Because of the nature of the program and the availability of resources and facilities, admission to the program is limited.

Graduates of the respiratory care technology program will be eligible to apply for the examinations for becoming a certified respiratory therapist (CRT), registered respiratory therapist (RRT) and licensed respiratory care practitioner. Licensure is required to practice as a respiratory care practitioner.

The respiratory care technology program is accredited by the Committee on Accreditation for Respiratory Care (CoARC).

According to various sections of the Ohio Revised Code with respect to Chapter 4761 Respiratory Care Regulations any persons with a plea of guilty to a judicial finding of guilt of, or a judicial finding of eligibility for intervention in lieu of conviction for an offense involving moral turpitude or of a felony or using dangerous drugs, as defined in section 4729.01 of the Revised Code, or use of alcohol to the extent that it impairs practice at an acceptable level of competence may not be accepted into the respiratory care technology (RCT) program at Stark State College; may not be able to take the licensure or certification examinations; may be refused acceptance of placement by the clinical sites; or may not be able to get license to practice respiratory care and be restricted in their ability to practice respiratory care. Such persons are advised to contact the director of the RCT program, and the executive director of the Ohio Respiratory Care Board.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

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Respiratory Care Technology

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
RCT121	Introduction to Respiratory Care	3
RCT122	Medical Gas Administration	3
MTH123	Intermediate Algebra	3
BIO123	Principles of Human Structure and Function	5
BIO125	Medical Terminology	3
		17
Semester II		
RCT123	Airway Management Procedure	3
RCT124	Pharmacology for Respiratory Therapy	2
RCT125	Clinical Practice Basic Procedures/Seminar	3
CHM121	General Chemistry	4
ENG124	College Composition †	3
		15
Semester III (Summer)		
RCT126	Introduction to Critical Care	3
RCT127	Cardiopulmonary Anatomy and Physiology	3
RCT128	Clinical Practice Airway Management/Seminar	2
		8
Semester IV		
RCT221	Advanced Respiratory Therapy Procedures	3
RCT222	Respiratory Diseases	3
RCT224	Clinical Practice-Critical Care/Seminar	3
BIO221	Principles of Microbiology	4
	Social Sciences Elective*	3
		16
Semester V		
RCT223	Patient Assessment and Monitoring	3
RCT225	Clinical Practice-Specialty Rotations/Seminar	5
BCA120	Business Computer Applications	4
	Psychology Elective**	3
		15

71 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* May select from sociology offerings only.
** May select from psychology offerings only.

A COLLEGE TECH PREP PARTICIPANT

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Information Technologies

Students majoring in the information technologies may pursue associate of applied science degrees in computer science, computer networking and telecommunications, computer network administration and security and interactive media technology as well as associate of applied business degrees in the areas of computer technology, e-commerce and computer programming and database technology.

The associate of applied science degree has a greater focus on math and science where the associate of applied business degree is less math intensive and incorporates general business and accounting courses into the curriculum. All information technology programs cover the latest technologies and skills and were designed with the assistance of advisory committees composed of representatives of local employers.

Nearly every facet of our lives today is affected by computers. Positions for personnel with computer skills are growing as organizations of all sizes need help to manage overwhelming amounts of information. Stark State College offers practical education to prepare graduates to fill this need.

The programs offered by the information technology division are designed to prepare students for positions in the growing information technology field, but also prepares them to make use of the power of computers in any field.

Graduates have many employment opportunities, including:

- Analyst
- Application Developer
- Audio/Video Technician
- Computer Operator
- Consultant
- Database Administrator
- Database Designer
- Education Specialist
- Graphic Artist
- Help Desk Analyst
- Informatics Technician
- Network Administrator
- Network Engineer
- Programmer
- Project Manager
- Security Specialist
- Software Engineer
- System Administrator
- Technical Support
- Technology Coordinator
- Training Specialist
- Video Game Designer
- Video Game Developer
- Web Designer
- Web Developer

The division's curriculum is continuously updated to keep pace with the advances in the computer field and to provide timely education in a wide range of computer-related topics. In addition, students get hands-on experience in the classroom and in open labs with industry-approved computer hardware and software.

Information technology professors have practical experience in the field. Their education and industry experience allow them to offer real-life perspectives on the complex world of computer technology. Stark State's information technology programs have been successful in providing students with the practical background and skills needed for employment in the computer field. The information technology division is helping to produce computer professionals with the skills employers want and need.

Commercial Music Technology

Make some noise! Be part of Stark State's new program in music, where the technology of sound design has never sounded so good.

This program covers the skills and concepts necessary for a career in music. The associate degree program focuses on recording, musicianship and music arranging with the goal of employment in corporate audio, audio reinforcement, trade show design, music composition or performance-based fields.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
IMT121	Interactive Media	3
IMT135	Theory and Composition I	3
ECA122	Computer Applications for Technical Professionals	3
ENG124	College Composition †	3
MTH101	Introduction to Algebra	4
		16
Semester II		
IMT129	Digital Audio Recording and Editing	3
IMT247	Theory and Composition II	3
PHY101	Principles of Physics	4
ECA155	Flash Animation and Design	3
ECA228	Internet/Intranet Design and Development	3
		16
Summer		
COM121/123	Effective Speaking or Inter-group Communications	3
ENG224	Composition and Literature	3
		6
Semester III		
BUS121	Business Administration	4
IMT230	Webcasting	3
IMT250	Music Technology	3
IMT239	Music Synthesis	3
ECA127	Programming Logic and Problem Solving	3
		16
Semester IV		
IMT223	Digital Video Recording and Editing	3
IMT248	Music Technology Practicum	1
IMT246	Applied Music Technology	3
MGT121	Principles of Management	3
PSY121	General Psychology	3
		13

TOTAL CREDITS 67

† Based on SSCT placement score.

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Computer Engineering Technology

Computer engineering is a discipline that combines elements of both hardware and software. Computer engineers have additional training in the areas of software design and hardware/software integration. Computer engineers are involved on all aspects of computing, from the design of individual personal computers and supercomputers, to the integration of computer systems into other kinds of systems (i.e., a motor vehicle has many subsystems that are computer- and digitally-oriented). Common computer engineering tasks include writing embedded software for real-time microcontrollers, designing chips, working with analog sensors, designing mixed signal circuit boards, and designing operating systems. Computer engineers are also well-suited for research in the field of robotics, which relies on using computers together with other electrical systems.

This program is accepted by the University of Toledo for the first portion of a bachelor of science degree. Students interested in pursuing a 2+2 or 2+3 bachelor of science degree should consult their academic advisor prior to initial enrollment in the courses.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
EST130	Electrical Circuits and Devices	4
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
		17
Semester II		
ECA145	PC Upgrading and Maintenance	3
ECA146	Introduction to Computer Networking	3
ECA128	Visual Basic Programming	3
EET123	Electronic Devices and Circuits	4
MTH122	College Algebra and Trigonometry II	3
		16
Semester III		
ECA277	UNIX/LINUX Operating Environment	3
EET227	PLCs and Industrial Controls I	3
ECA227	Assembly Language Programming	3
PHY121	Physics I	4
	Arts/Humanities/Social Science Elective*	3
		16
Semester IV		
ENG221	Technical Report Writing	3
MTH221	Concepts of Calculus	3
PHY122	Physics II	4
EET262	Pulse and Digital Integrated Circuits	4
COM121/123	Effective Speaking or Inter-group Communications	3
	Arts/Humanities/Social Science Elective*	3
		20

TOTAL CREDITS 69

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

A COLLEGE TECH PREP PARTICIPANT

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Computer Network Administration and Security Technology

This program provides students with information on computer network administration, from basic PC hardware and software to the latest network operating systems. Students gain an understanding of Cisco, Microsoft and Unix-based operating systems and how they are used in today's marketplace. This is an ever-growing and rapidly changing field that requires graduates to work across many platforms and this option provides the appropriate training.

This program is accepted by The University of Akron for the first portion of a bachelor of science in computer networking. Students interested in pursuing a 2+2 or 2+3 bachelor of science should consult their academic advisor.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
ECA145	PC Upgrading and Maintenance	3
ECA146	Introduction to Computer Networking	3
MTH121	College Algebra and Trigonometry I	4
		16
Semester II		
ECA131	MS Windows XP and 2003 Server	3
ECA244	Microsoft Windows Server 2003 Network Infrastructure	3
ECA134	CCNA Phase I	2
ECA135	CCNA Phase II	2
ECA277	UNIX/LINUX Operating Environment	3
MTH122	College Algebra and Trigonometry II	3
		16
Summer		
ENG124	College Composition †	3
	Arts/Humanities/Social Science Elective*	3
		6
Semester III		
COM121/123	Effective Speaking or Inter-group Communications	3
ECA273	MS SQL Server Administration	3
ECA276	UNIX/LINUX Network Administration	3
PHY121	Physics I	4
ECA220	iSeries Operating Environment	
ECA250	CCNA Phase III and IV**	3/4
ECA274	UNIX/LINUX System Administration	
		16/17
Semester IV		
ECA245	Designing Security for a Windows 2003 Network	3
ECA246	Administering, Implementing and Designing Directory Services	3
ECA278	Firewall and Network Security	3
ECA279	Web Server Administration	3
ENG221	Technical Report Writing	3
	Arts/Humanities/Social Science Elective*	3
		18

TOTAL CREDITS 72/73

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

** CCNA Phase III and IV required elective for The University of Akron

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Computer Network Administration and Security Technology

CISCO Network Administration Option

Cisco Systems, Inc. is a leader in networking technologies for small businesses, corporations, and the Internet. Network technicians and administrators must have an understanding of their products and services in order to be a member of the information technology community.

Stark State College has been approved as a Cisco Networking Academy which allows students to access networking tools, software and other learning materials directly from Cisco. This program was developed to train network technicians to complete the Cisco Certified Network Associate (CCNA) examination, which has become a standard of excellence recognized worldwide.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
ECA145	PC Upgrading and Maintenance	3
ECA146	Introduction to Computer Networking	3
MTH121	College Algebra and Trigonometry I	4
		16
Semester II		
ECA132	Help Desk Concepts	3
EET120	DC Circuit Analysis	4
ECA277	UNIX/LINUX Operating Environment	3
ENG124	College Composition †	3
MTH122	College Algebra and Trigonometry II	3
		16
Summer		
ENG221	Technical Report Writing	3
	Arts/Humanities/Social Science Elective*	3
		6
Semester III		
ECA254	UNIX/LINUX Shell Scripting	3
ECA131	MS Windows XP and 2003 Server	3
ECA244	Microsoft Windows 2003 Network Infrastructure	3
ECA134	CCNA Phase I	2
ECA135	CCNA Phase II	2
PHY121	Physics I	4
		17
Semester IV		
COM121/123	Effective Speaking or Inter-group Communications	3
ECA250	CCNA Phase III and IV	4
ECA246	Administering, Implementing and Designing Directory Services	3
ECA278	Firewall and Network Security	3
ECA276	UNIX/LINUX Network Administration	3
ECA274	UNIX/LINUX System Administration	
		16

TOTAL CREDITS 71

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

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Computer Network Administration and Security Technology

UNIX/LINUX Database Administration Option

This program provides the student with knowledge on computer network administration with special emphasis on the Unix/Linux operating systems and also administration of the Oracle relational database management system. Medium to large scale companies typically have heterogeneous network environments. These companies will typically have many Windows desktop client machines, but store their critical data on one or more large Unix database servers. This course will provide the user with the standard knowledge of Microsoft Windows clients and server, administration of Unix/Linux servers, standard SQL syntax, and administration of the Oracle RDBMS.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
ECA145	PC Upgrading and Maintenance	3
ECA146	Introduction to Computer Networking	3
MTH121	College Algebra and Trigonometry I	4
		16
Semester II		
CAP139	Introduction to Oracle SQL	3
ECA253	Database Design and Modeling	3
ECA277	UNIX/LINUX Operating Environment	3
ENG124	College Composition †	3
MTH122	College Algebra and Trigonometry II	3
		15
Summer		
ENG221	Technical Report Writing	3
PHY121	Physics I	4
		7
Semester III		
CAP142	Oracle Architecture and Administration	3
ECA254	UNIX/LINUX Shell Scripting	3
ECA131	MS Windows XP and 2003 Server	3
ECA244	Microsoft Windows 2003 Network Infrastructure	3
ECA274	UNIX/LINUX System Administration	3
ECA276	UNIX/LINUX Network Administration	3
		18
Semester IV		
COM121/123	Effective Speaking or Inter-group Communications	3
ECA246	Adminstering, Implmenting and Designing Directory Services	3
ECA279	Web Server Administration	3
	Arts/Humanities/Social Science Elective*	3
CAP250	Oracle Performance and Tuning	
CAP249	Oracle Backup and Recovery	3
ECA273	Microsoft SQL Server Administration	
ECA252	Data Mining and Warehousing	
		15

TOTAL CREDITS 71

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

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Computer Programming and Database Technology

Computer programming and database is a discipline that combines database management systems with computer software to determine ways to organize and store data. Graduates learn to identify user requirements, set up computer databases, and test and coordinate modifications to the computer database systems. An organization's computer programmer and database scientist ensures the performance of the system, understands the platform on which the database runs, and adds new users to the system. Because they also design and implement system security, computer programmers and database scientists often plan and coordinate security measures. With the volume of sensitive data generated growing rapidly, data integrity, backup systems, and database security have become increasingly important aspects of the job of computer programmer and database scientist.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
ENG124	College Composition †	3
MTH222	Statistics	3
COM121/COM123	Effective Speaking or Inter-group Communications	3
		15
Semester II		
ECA128	Visual Basic Programming	3
ECA253	Data Modeling and Database Design	3
ECA228	Internet/Intranet Design & Development	3
ECA223	Java Programming	3
ACC127	Quantitative Business Statistics	3
		15
Summer		
ENG221/ENG230	Technical Report Writing or Business Communication	3
BUS121	Business Administration	4
	Arts/Humanities/Social Science Elective*	3
		10
Semester III		
ACC121	Principles of Accounting I	4
ECA229	Microsoft Server Side Scripting	3
ECA139	Microsoft SQL Server Database Design and Implementation	3
ECA225	Client-Side Scripting	3
ECA230	Java Web Database Programming	3
		16
Semester IV		
ECA236	Open Source Server Side Scripting	3
ECA233	Analyzing Software Requirements and Developing Solutions	3
ECA252	Data Mining and Data Warehousing	
ECA138	Web Design	3
ECA142	Oracle Database 10g: Introduction to SQL	3
ECA226	Windows Programming with C#	3
		15

TOTAL CREDITS 71

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Computer Programming and Database Technology

Database Management Option

This program provides students with the opportunity to prepare for a career in information technology with an emphasis on database management. Students build the skills and knowledge they'll need to establish and manage data storage and transfer solutions. Students will gain a foundation for understanding computer programming; study system analysis, design, development and implementation cycles; design code using appropriate programming methodology; acquire the communication, critical thinking and technical skills required in the workplace by analyzing case studies and working on hands-on projects; complete a capstone project that focuses on your area of emphasis and enables you to apply the concepts and skills you've learned in real and simulated business situations. Upon graduation from this program, students will be prepared for entry-level information technology positions in database management.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
ENG124	College Composition †	3
MTH222	Statistics	3
COM121/COM123	Effective Speaking or Inter-group Communications	3
		15
Semester II		
ECA253	Data Modeling and Database Design	3
ECA228	Internet/Intranet Design & Development	3
ECA142	Oracle Database 10g: Introduction to SQL	3
ECA139	Microsoft SQL Server Database Design and Implementation	3
ACC127	Quantitative Business Statistics	3
		15
Summer		
ENG221/ENG230	Technical Report Writing or Business Communication	3
BUS121	Business Administration	4
	Arts/Humanities/Social Science Elective*	3
		10
Semester III		
ACC121	Principles of Accounting I	4
ECA229	Microsoft Server Side Scripting	3
ECA151	Oracle Database 10g: PL/SQLProgramming and Tuning	3
ECA225	Client-Side Scripting	3
ECA269	Microsoft SQL Server Database Analysis Services	3
		16
Semester IV		
ECA236	Open Source Server Side Scripting	3
ECA128	Visual Basic Programming	3
ECA270	Oracle Database 10g: Architecture and Administration I	3
ECA271	Oracle Database 10g: Administration II	3
ECA272	Microsoft SQL Server Database Reporting Services	3
ECA252	Data Mining and Data Warehousing	
		15

TOTAL CREDITS 71

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

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Computer Science and Engineering Technology

Graduates of this program will (1) develop software using the major software development language (2) design, describe, and use state-of-the-art hardware/software systems; (3) maintain an awareness of contemporary issues in computer science and engineering in a global and societal context and an understanding of the professional and ethical responsibilities of their profession; (4) demonstrate effective oral and written communication.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
ENG124	College Composition †	3
MTH121	College Algebra and Trigonometry I	4
PHY121	Physics I	4
		17
Semester II		
ECA223	Java Programming	3
ECA228	Internet/Intranet Design and Development	3
ECA222	C++ Programming	3
MTH122	College Algebra and Trigonometry II	3
	Arts/Humanities/Social Science Elective*	3
	Arts/Humanities/Social Science Elective*	3
		18
Semester III		
ECA128	Visual Basic Programming	3
ECA253	Data Modeling and Database Design	3
ECA230	Java Web Database Programming	3
ENG221	Technical Report Writing	3
MTH221	Concepts of Calculus	3
ECA226	Windows Programming with C#	3
		18
Semester IV		
ECA224	Advanced C++ Programming	3
ECA229	Microsoft Server Side Scripting	3
ECA233	Analyzing Software Requirements and Developing Solutions	3
COM121/123	Effective Speaking or Inter-group Communications	3
ECA239	Advanced Java Programming	3
ECA260	Software Engineering for Hand-held Devices	3
ECA261	Software Engineering for Robotics	
		18

TOTAL CREDITS 71

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

Note: Some courses will prepare students for MSCD certification.

COLLEGE TECH PREP

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Computer Science and Engineering Technology

Video Game Design Option

A video game developer is a software developer (a business or an individual) that creates computer or video games. A developer may specialize in a certain video game system, such as the Microsoft Xbox, Nintendo GameCube, or the Sony PlayStation 2 or may develop for a variety of systems including PCs. Developers also specialize in certain types of games, such as RPGs (Role Playing Games) or FPSs (First Person Games). Some focus on porting games from one system to another. Some focus on translating games from one language to another, especially from Japanese to English; an unusual few do other kinds of software development work in addition to games. Most video game publishing companies, such as Electronic Arts, Activision, and Sony, maintain development studios, but these companies are generally called "publishers" and not "developers", as publishing is the primary activity of these companies, and is the source of most of their income. Other than the publishers, there are well over 1,000 video game development companies today. Many are tiny 1- or 2-person operations creating Flash games for the Web, or games for cell phones. Others are large companies with multiple locations, such as Foundation 9 Entertainment, which says it has over 300 employees. As a rule, developers are privately held companies; only a very few non-publishing developers have ever been publicly traded companies.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
IMT122	Graphic Arts Design	3
MTH121	College Algebra and Trigonometry I	4
ECA156	Game Design	3
		16
Semester II		
IMT125	3D Graphics Modeling	3
ECA222	C++ Programming	3
ENG124	College Composition †	3
MTH122	College Algebra and Trigonometry II	3
	Arts/Humanities/Social Science Elective*	3
		15
Summer		
ENG221	Technical Report Writing	3
COM121/123	Effective Speaking or Inter-group Communications	3
	Arts/Humanities/Social Science Elective*	3
		9
Semester III		
ECA281	Software Engineering Game Development I	3
ECA223	Java Programming	3
MTH221	Concepts of Calculus	3
ECA155	Flash Animation and Design	3
ECA224	Advanced C++ Programming	3
		15
Semester IV		
ECA239	Advanced Java Programming	3
ECA282	Flash Web Programming	3
ECA240	Advanced Gaming and Simulation Topics	3
ECA241	3D Game Programming	3
PHY121	Physics I	4
		16

TOTAL CREDITS 71

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

COLLEGE TECH PREP

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Cyber Security and Computer Forensics Technology

The cyber security and computer forensics technology program covers areas that are identified in the Emergency Preparedness and Response, Information Analysis and Infrastructure Protection divisions of the Department of Homeland Security. Major topics of the program include: risk and threat assessment on computer system and data, developing procedures to prevent and react to data and computer-related security breaches, and computer system security plan documentation.

Students graduating from Stark State College with a cyber security and computer forensics technology degree will assess a company's risk, document and implement security procedures and check for security breaches in their systems. Cyber security and computer forensic graduates can find employment in both the private and public sector, including positions related to homeland security.

Students interested in pursuing a 2+2 bachelor of science degree should consult their academic advisor prior to initial enrollment in the courses.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA145	PC Upgrading and Maintenance	3
ECA146	Introduction to Computer Networking	3
ECA133	Computer Applications Support	3
MTH121	College Algebra and Trigonometry I	4
		16
Semester I		
ECA127	Programming Logic and Problem Solving	3
ECA136	Principles of Information Security	3
ECA137	Computer Crime and Investigation	3
ENG124	College Composition †	3
MTH122	College Algebra and Trigonometry II	3
		15
Summer		
ENG221	Technical Report Writing	3
COM121/123	Effective Speaking or Inter-group Communications	3
		6
Semester III		
ECA134	CCNA Phase I	2
ECA135	CCNA Phase II	2
ECA257	File Systems Analysis	3
ECA129	Cryptography	3
ECA277	UNIX/LINUX Operating Environment	3
PHY121	Physics I	4
		17
Semester IV		
ACC235	Forensic Accounting and Fraud Investigation	3
ACC236	Cyber Law and Ethics	3
ECA256	Disaster Recovery and Incident Planning	3
ECA258	Cyber Forensics and Data Recovery	3
ECA278	Firewall and Network Security	3
ECA275	Ethical Hacking	3
		18

TOTAL CREDITS 72

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Interactive Media Technology

The interactive media technology program is an adventure into the creative side of computing emphasizing 3D graphics and animation.

An associate degree in interactive media technology will prepare students for careers in communication through media. The emphasis of the program is in 3D animation and modeling. The skills the student develops can be applied to the healthcare and manufacturing industries to provide 3D instruction and training materials. Additional fields of employment include gaming, marketing, advertising, and entertainment.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
IMT121	Interactive Media	3
MTH121	College Algebra and Trigonometry I	4
IMT122	Graphic Arts Design	3
ENG124	College Composition †	3
		16
Semester II		
IMT125	3D Graphics Modeling	3
IMT131	Color Theory and Design	3
IMT133	Technical Illustration	
IMT249	Textures and Effects for 2D and 3D Design	3
IMT245	Graphic Arts Design II	3
IMT223	Digital Video Recording and Editing	3
		15
Summer		
COM121/123	Effective Speaking or Inter-group Communications	3
ECA228	Internet/Intranet Design and Development	3
	Arts/Humanities/Social Science Elective*	3
		9
Semester III		
ENG227	Writing for Media	3
IMT253	Graphics for Illustration	3
IMT240	Advanced 3D Graphics Modeling	3
IMT227	3D Graphics Animation	3
	Arts/Humanities/Social Science Elective*	3
		15
Semester IV		
PHY101	Principles of Physics	
CHM101	Introduction to Chemistry	3/4
BIO101	Introduction to Anatomy and Physiology	
IMT228	Advanced 3D Graphics Animation	3
IMT129	Digital Audio Recording and Editing	3
ECA155	Flash Animation and Design	3
		12/13

TOTAL CREDITS 67/68

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: ACC130, PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121 or art, photography, theater or cinema class at Kent State University-Stark Campus.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

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Interactive Media Technology

Video Production Option

Lights, camera, action! Use your imagination to bring your ideas to the big screen. Explore the exciting side of video from concept to Web and DVD.

Camera work, digital editing and special effects are the focus of this degree. From script to screen, students will shoot, edit and master quality productions. Upon completion of the associate degree, students are prepared for employment with multimedia firms, creating educational, commercial or industrial videos.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
IMT121	Interactive Media	3
MTH121	College Algebra and Trigonometry I	4
IMT122	Graphic Arts Design	3
ENG124	College Composition †	3
		16
Semester II		
IMT125	3D Graphics Modeling	3
IMT129	Digital Audio Recording and Editing	3
IMT223	Digital Video Recording and Editing	3
ENG227	Writing for Media	3
ECA155	Flash Animation and Design	3
		15
Summer		
COM121/123	Effective Speaking or Inter-group Communications	3
ECA228	Internet/Intranet Design and Development	3
	Arts/Humanities/Social Science Elective*	3
		9
Semester III		
PHY101	Principles of Physics	
CHM101	Introduction to Chemistry	3/4
BIO101	Introduction to Anatomy and Physiology	
IMT253	Graphics for Illustration	3
IMT237	Compositing	3
IMT242	Lighting and Cinematography	3
IMT252	Advanced Editing and Audio for Video	3
		15/16
Semester IV		
IMT132	Digital Photography	
IMT238	Advanced Video Production	3
IMT243	Advanced Compositing	
IMT251	Authoring and Video Compression	3
IMT245	Graphic Arts II	3
	Arts/Humanities/Social Science Elective*	3
		12

TOTAL CREDITS 67/68

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: ACC130, PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121 or art, photography, theater or cinema class at Kent State University-Stark Campus.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Management Information Systems

Management information systems (MIS) studies the use of computers in business. As such, students study both business and technology and learn how to solve business problems using information technology. After learning about each key area of business, MIS students learn the tools they will apply to solve problems. Tools include computer hardware, operating systems, networking, programming, and database management systems. Application of the tools includes distributed information systems, system analysis, system design, and decision support systems. Management includes technology management and system implementation.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA144	Internet, Intranet, Extranet Technologies	3
ENG124	College Composition †	3
BUS121	Business Administration	4
COM121/123	Effective Speaking or Inter-group Communications	3
		16
Semester II		
ECA147	Advanced Microcomputer Applications	3
ECA148	Spreadsheet Analysis	3
ECA228	Internet/Intranet Design and Development	3
ECA143	Planning, Designing and Implementing an Imaging System	3
MTH222	Statistics	3
		15
Summer		
	Arts/Humanities/Social Science Elective*	3
ENG221	Technical Report Writing	3
		6
Semester III		
ACC121	Principles of Accounting I	4
ACC127	Quantitative Business Statistics	3
ECA152	Microsoft Access Database	3
ECA255	Microsoft Project Tools	3
ECA154	Internet Design Tools	3
		16
Semester IV		
ECA253	Data Modeling and Database Design	3
ECA155	Flash Animation and Design	3
ECA264	IT Project Management	3
ECA265	Generating Reports for Decision Making	3
ECA133	Computer Applications Support	3
		15

TOTAL CREDITS 68

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

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Management Information Systems

Help Desk/Computer Support Specialist Option

Help desk and computer support is a discipline that studies the use of computers in business, industry, government and other organizations. This program is designed to train students to work in the technology help desk/technical support arena which has seen such explosive growth in recent years. The program is designed to allow students at all levels to take part, with a level of difficulty gradually unfolding in a series of stepwise courses, culminating in an associate of applied business in management information systems with a focus on help desk and computer user support. This program prepares students to successfully work with customers and technology in a professional environment.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA132	Help Desk Concepts	3
ENG124	College Composition †	3
MTH222	Statistics	3
ECA138	Web Design	3
ECA149	Introduction to Computers	1
ECA153	Introduction to the Internet	1
		17
Semester II		
ECA147	Advanced Microcomputer Applications	3
ECA148	Spreadsheet Analysis	3
ECA144	Internet, Intranet, Extranet Technologies	3
ECA143	Planning, Designing and Implementing an Imaging System	3
ECA228	Internet/Intranet Design and Development	3
		15
Summer		
ENG221	Technical Report Writing	3
BUS121	Business Administration	4
		7
Semester III		
ACC127	Quantitative Business Statistics	3
ECA152	Microsoft Access Database	3
ECA255	Microsoft Project Tools	3
ECA265	Generating Reports for Decision Making	3
ECA133	Computer Applications Support	3
		15
Semester IV		
ECA264	IT Project Management	3
ECA253	Data Modeling and Database Design	3
ACC121	Principles of Accounting I	4
	Arts/Humanities/Social Science Elective*	3
COM121/123	Effective Speaking or Inter-group Communications	3
		16

TOTAL CREDITS 70

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Management Information Systems

Medical Informatics Option

Medical informatics is the intersection of information science, medicine and health care. It deals with the resources, devices and methods required to optimize the acquisition, storage, retrieval and use of information in health and medicine. Informatics tools include not only computers but also clinical guidelines, formal medical terminologies, and information and communication systems. A degree in medical informatics provides students with expertise needed to evaluate information, organize it efficiently, index it for retrieval and preserve it for history. Students gain an understanding of information behavior and policy, learn effective procedures for implementation and assessment of information systems and develop strategies for enhancing user satisfaction in the information-seeking process. A degree in medical informatics enables students to seek positions where data, systems and people come together.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA144	Internet, Intranet, Extranet Technologies	3
ENG124	College Composition †	3
BIO125	Medical Terminology	3
COM121/123	Effective Speaking or Inter-group Communications	3
		15
Semester II		
ECA253	Data Modeling and Database Design	3
ECA147	Advanced Microcomputer Applications	3
ECA148	Spreadsheet Analysis	3
ECA228	Internet/Intranet Design and Development	3
MTH222	Statistics	3
		15
Summer		
	Arts/Humanities/Social Science Elective*	3
ENG221	Technical Report Writing	3
		6
Semester III		
HIT230	Healthcare Delivery in the U.S	2
ACC127	Quantitative Business Statistics	3
ECA152	Microsoft Access Database	3
ECA255	Microsoft Project Tools	3
ECA143	Planning, Designing and Implementing an Imaging System	3
ECA150	Informatics	3
		17
Semester IV		
ECA280	Advanced Informatics	3
	Health or Biology Division Elective	3
ECA264	IT Project Management	3
ECA265	Generating Reports for Decision Making	3
ECA133	Computer Applications Support	3
		15

TOTAL CREDITS 68

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Web Design and Development Technology

(formerly E-Commerce Technology)

Web design and development technology students focus on the exciting and lucrative field of online Internet design and programming. They learn to develop interactive database-driven Web sites using the latest technology. While everyone else is trying to figure out the new information technology buzzwords, Stark State's Web design and development students will be applying them in the classroom.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECA122	Computer Applications for Technical Professionals	3
ECA127	Programming Logic and Problem Solving	3
ENG124	College Composition †	3
ECA228	Internet/Intranet Design andDevelopment	3
BUS123	Business Mathematics	4
		16
Semester II		
ECA225	Client Side Scripting	3
ECA253	Data Modeling and Database Design	3
ECA128	Visual Basic Programming	3
ECA155	Flash Animation and Design	3
ECA138	Web Design	3
		15
Summer		
MTH123	Intermediate Algebra	3
COM121/123	Effective Speaking or Inter-group Communications	3
	Arts/Humanities/Social Science Elective*	3
		9
Semester III		
ENT120	Entrepreneurship	2
ECA139	Microsoft SQL Server Database Design and Implementation	3
ECA226	Windows Programming with C#	3
	Focus Class I	3
ECA229	Microsoft Server Side Scripting	3
ECA266	Search Engine Optimization	2
		16
Semester IV		
ECA234	Advanced Web Development	3
ENT121	Entrepreneurial Marketing	3
ECA154	Internet Design Tools	3
ECA247	Advanced XML and Web Services	3
	Focus Class II	3
		15

TOTAL CREDITS 71

† Based on SSCT placement score.

* Arts/Humanities/Social Sciences Electives: PSY121, PSY122, PSY123, PSY124, PSY221, PHL122, SOC121, SOC122, SOC123, SOC225, BUS122, BUS221, PSC121, ACC130.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Public Service Technologies

Careers in public service are in demand more than ever before. The public service technologies of Stark State College offer associate degrees in early childhood education, and human and social services technology.

Stark State's goal is to attract traditional and nontraditional students to careers in these areas and to provide the quality education, training, skills and values necessary for our students to succeed and excel in those fields.

COLLEGE TECH PREP

A COLLEGE TECH PREP PARTICIPANT

Early Childhood Education

The early childhood education program prepares students for professional careers as teachers, paraprofessionals, and administrators in a variety of childcare/education settings. Graduates may seek employment in public and private preschool, Montessori, Head Start, school-age and other programs.

The associate degree program also provides a solid foundation for further education. Stark State College provides early childhood education graduates with a solid basis for pursuing a bachelor's degree in education and related fields.

Coursework features a holistic, child-centered approach to educating children that promotes the appreciation of the diversity and special needs of today's children and families. Teacher training emphasizes developmentally appropriate curriculum design and instructional skill development based on guidelines set by the National Association for Education of Young Children (NAEYC). The 68 credit hour program includes extensive field observations and a 210-hour practicum.

The qualified candidate for the associate degree in early childhood education will demonstrate professional knowledge, abilities, dispositions, values, and attitudes regarding child development and learning, curriculum development and implementation, family and community relationships, assessment and evaluation, professionalism, and practice during field experiences.

Students are required to complete an early childhood education (ECE) application packet. The ECE application packets are distributed to students when enrolled in Introduction to Early Childhood Education (ECE121) or Curriculum Design and Instruction (ECE122).

All students interested in the ECE program are required to undergo a criminal background check prior to applying to the ECE program. Criminal background checks may prevent placements, program completion/graduation, and potential employment in the field.

Upon successful completion of the early childhood education program and with the recommendation of early childhood education department chair, graduates may apply for their pre-kindergarten associate certificate from the Ohio Department of Education.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECE121	Introduction to Early Childhood Education*✧	3
SOC123	Dynamics of the Family	3
PSY121	General Psychology	3
ECE126	Educational Technology*	3
ENG124	College Composition †	3
		15
Semester II		
ECE122	Curriculum Design and Instruction✧	3
ECE123	Health Nutrition	3
SOC225	Cultural Diversity✧	3
MTH222	Statistics	3
PSY125	Child Development✧	3
COM121	Effective Speaking	3
		18
Semester III		
ECE124	Infant-Toddler Curriculum✧	2
ECE221	Language Arts✧	3
ECE222	Creative Materials and Guided Play✧	3
ECE223	Community and Family-based Programs	3
ECE226	Wrap-around Programs	2
ECE229	Educational Psychology	3
PHL122	Ethics	3
		19
Semester IV		
ECE224	Early Childhood Program Administration	3
ECE225	The Exceptional Child	3
ECE227	ECE Practicum and Seminar	3
ECE228	Phonics for Young Children	3
BIO126	Science, Energy and the Environment	4
		16

68 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Developmental writing course requirements must be completed prior to enrollment.
✧ Requires a grade of "C" or better.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Early Childhood Education

Intervention Specialist Option

The early childhood education intervention specialist option prepares students for employment in agencies that provide services to children with special needs. Graduates may seek employment as paraprofessionals in public institutions such as MRDD or public preschool programs.

The associate degree program also provides a solid foundation for further education. Stark State College provides early childhood education graduates with a solid basis for pursuing a bachelor's degree in education and related fields.

Coursework features a holistic, child-centered approach to educating children that promotes the appreciation of the diversity and special needs of today's children and families. Teacher training emphasizes developmentally appropriate curriculum design and instructional skill development based on guidelines set by the National Association for Education of Young Children (NAEYC) and Ohio standards. The 71 credit hour program includes extensive field observations and a 210-hour practicum in a special needs classroom.

The qualified candidate for the associate degree in early childhood education intervention specialist major will demonstrate professional knowledge, abilities, dispositions, values, and attitudes regarding child development and learning, curriculum development and implementation, family and community relationships, assessment and evaluation, professionalism, and practice during field experiences.

Students are required to complete an early childhood education (ECE) application packet. The ECE application packets are distributed to students when enrolled in Introduction to Early Childhood Education (ECE121) or Curriculum Design and Instruction (ECE122).

All students interested in the ECE program are required to undergo a criminal background check prior to applying to the ECE program. Criminal background checks may prevent placements, program completion/graduation, and potential employment in the field.

Upon successful completion of the early childhood education program and with the recommendation of early childhood education department chair, graduates may apply for their pre-kindergarten associate certificate from the Ohio Department of Education.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
ECE121	Introduction to Early Childhood Education✧	3
SOC123	Dynamics of the Family	3
PSY121	General Psychology	3
ENG124	College Composition †	3
ECE126	Educational Technology*	3
PHL122	Ethics	3
		18
Semester II		
ECE122	Curriculum Design and Instruction✧	3
SOC225	Cultural Diversity	3
PSY125	Child Development*	3
MTH222	Statistics	3
COM121	Effective Speaking	3
ECE125	Children with Physical Exceptionalities* ✧	3
		18
Semester III		
ECE221	Language Arts* ✧	3
ECE222	Creative Materials and Guided Play* ✧	3
ECE223	Community and Family-based Programs* ✧	3
ECE229	Educational Psychology*	3
ECE230	Children with Socioemotional Exceptionalities	3
ECE226	Wrap-around Programs✧	2
ECE124	Infant-Toddler Curriculum* ✧	2
		19
Semester IV		
ECE224	Early Childhood Program Administration	3
ECE225	The Exceptional Child* ✧	3
ECE228	Phonics for Young Children* ✧	3
ECE227	ECE Practicum and Seminar	3
BIO126	Science, Energy and the Environment	4
		16

71 TOTAL CREDIT HOURS

✧ Requires a grade of "C" or better.
† Based on SSCT placement score.
* Course offered this semester only

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Human and Social Service Technology

The human and social service technology program prepares students for employment as paraprofessionals in the field of social work. Career opportunities are in a wide range of human and social services.

The human and social service field is concerned with those services and occupations that provide for meeting the diverse needs of individuals and/or families for a more satisfying, self-sufficient way of life. Social services personnel must be knowledgeable about and sensitive to the unique needs and cultural diversity of people of all ages and socioeconomic circumstances. Students participate in a supervised practicum as well as classroom instruction to help develop and enhance professional skills.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
SWK121	Introduction to Social Welfare	3
ENG124	College Composition †	3
SOC121	Sociology	3
COM121	Effective Speaking	3
BCA120	Business Computer Applications	4
		16
Semester II		
SWK128/SOC125	Introduction to Gerontology**	3
SWK224	Poverty in the U.S.	3
PSY121	General Psychology	3
SWK127/PSY127	Group Processes**	4
BIO127	Human Biology	4
		17
Semester III		
SWK124	Methods in Practice I	3
SWK126	Human Behavior and the Social Environment	3
MTH222	Statistics	3
SWK125	Substance Abuse	3
PSC121	Political Science	3
	Elective*	3
		18
Semester IV		
BUS122	Basic Economics	3
SWK227	Social Services	2
SWK228	Practicum Seminar	1
SWK130	Methods in Practice II	3
SWK226	Social Service Law	3
SOC225	Cultural Diversity	3
	Elective*	3
		18

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.

* Student may select from SWK225, SWK129/SOC126, SWK230/SOC227, SOC123, SOC222, PSY123, PSY125, PSY223, PSY221. Students who successfully complete SWK129 and SWK230 as their technical electives, or in addition to their technical electives, may apply for the gerontology option and/or certificate of competence.

** Cross-listed course; HSST majors should register for the SWK version.

Note: Grade of "C" or better required for all courses relating to the gerontology option/certificate of competence.

All students in the HSST program may be required to undergo a criminal background check prior to beginning their required practicums. Criminal backgrounds may prevent placements, program completion/graduation, and potential employment in the field.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Human and Social Service Technology

Gerontology Option

The gerontology option provides students with knowledge and understanding of the normal but highly variable process of aging and human development. The option prepares students to be more effective in working with older adults and in the implementation of programs and services for the elderly. The gerontology option is designed for the professional or paraprofessional individual currently working in the field of aging; students who anticipate working with older adults; and anyone who is interested in understanding the aging process for personal or professional reasons.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Semester I		
SWK121	Introduction to Social Welfare	3
ENG124	College Composition †	3
SOC121	Sociology	3
COM121	Effective Speaking	3
BCA120	Business Computer Applications	4
		16
Semester II		
SWK128/SOC125	Introduction to Gerontology*	3
SWK224	Poverty in the U.S.	3
PSY121	General Psychology	3
SWK127/PSY127	Group Processes*	4
BIO127	Human Biology	4
		17
Semester III		
SWK124	Methods in Practice I	3
SWK126	Human Behavior and the Social Environment	3
MTH222	Statistics	3
SWK125	Substance Abuse	3
PSC121	Political Science	3
SWK129	Psychosocial Aspects of Aging	3
		18
Semester IV		
BUS122	Basic Economics	3
SWK227	Social Services	2
SWK228	Practicum Seminar	1
SWK130	Methods in Practice II	3
SWK226	Social Service Law	3
SOC225	Cultural Diversity	3
SWK230	Social Services for the Elderly	3
		18

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.
* Cross-listed course; HSST majors should register for the SWK version.

Note: Grade of "C" or better required for all courses relating to the gerontology option/certificate of competency.

All students in the HSST program may be required to undergo a criminal background check prior to beginning their required practicums. Criminal backgrounds may prevent placements, program completion/graduation, and potential employment in the field.

Gerontology Certificate of Competency

The gerontology certificate of competency enhances the careers of those majoring in various fields at Stark State College. It is advantageous to human and social service workers who plan to work with older adults and their families, as well as health technology majors who assist in the medical care of an aging population. It is beneficial to business technology majors who will assist with retirement planning and need to understand the consumer behavior of the older population. It also will help architectural drafters and computer programmers who will assist in maintaining older adults' independence for as long as possible.

SUGGESTED COURSE SEQUENCE

		Credit Hours
Required courses		
SOC125/SWK128	Introduction to Gerontology**	3
SOC126/SWK129	Psychosocial Aspects of Aging**	3

Elective courses
(Students are required to select one course from each of the areas below.)

Social Services and Human Development:		
FIN223	Estate and Income Tax Planning	3
HIT230	Healthcare Delivery in the US	2
OTA223	Life Span Development	5
PSY123	Human Growth and Development	3
SWK230	Social Services for the Elderly	3
Health and Aging/Health Policy:		
BIO122	Anatomy and Physiology II	4
BIO123	Principles of Human Structure and Function	5
BIO127	Human Biology	4
FIN222	Retirement Planning for Employees	3
MAT231	Reimbursement for Healthcare Services	3

11-16 SEMESTER CREDITS+

** HSST students must register for the required courses using the SWK prefix; non-HSST students must register using the SOC prefix.

+ Credit hours required for completion of the certificate of competency varies. Most students will only need to complete two courses, 6 credit hours, in addition to their degree requirements.

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

In order to keep pace with progress, the College reserves the right to change fees, academic programs, course descriptions, or any other statements, contained in this catalog at the discretion of the College or its Board of Trustees. Please refer to www.starkstate.edu for the most current information.

Certificates of Competency

Stark State College recognizes that not all students will seek an associate degree. Individuals may need to develop specific sets of skills to qualify for or improve their performance in a given career setting. In response to this need, Stark State College offers certificates of competency which document a student's proficiency in a variety of knowledge areas.

The credit certificates of competency listed on the following pages are offered to non-degree seeking individuals desiring an opportunity to gain or improve marketable skills. These courses are offered on campus; however, on-site training is available for companies and can be tailored to meet their needs.

Students who choose to enroll in an associate degree program may apply these courses toward the degree if it is in the same area of study. To apply for these certificates of competency, please contact the department chair of the appropriate department by calling 330-494-6170.

For the most current certificates of competency, visit ***www.starkstate.edu/competency***.

Certificates of Competency*

Business Technologies

ACCOUNTING AND FINANCE

Financial Accounting	Quantitative Business Statistics (ACC127) Financial Accounting (ACC132) Intermediate Accounting I (ACC221) Intermediate Accounting II (ACC222)
Managerial Accounting	Quantitative Business Statistics (ACC127) Financial Accounting (ACC132) Managerial Accounting (ACC133) Cost Accounting (ACC223)
Taxation	Individual Taxation (ACC124) Business Taxation (ACC228) Estate and Income Tax Planning (FIN223) Advanced Taxation Topics (ACC233)

ADMINISTRATIVE INFORMATION

Broadcast Captioning ***(for reporting professionals)***	Basic Broadcast Captioning (IRT230) Advanced Broadcast Captioning (IRT235) Technical Electives *(9 hrs. see dept. chair)*
Broadcast Captioning ***(for non-reporting professionals and students)***	Realtime Theory I (IRT121) Realtime Theory II (IRT122) Speed Building I (IRT129) Speed Building II (IRT130) Speed Building III (IRT123) IRT Internship (IRT232) Basic Broadcast Captioning (IRT230) Advanced Broadcast Captioning (IRT235) Realtime Software Applications (IRT229) Technical Electives *(6 hrs. see dept. chair)*
Desktop Publishing	Desktop Publishing – Microsoft Publisher (OAD128) Graphic Design Concepts (OAD131) Computer Applications – PowerPoint (OAD104) Web Publishing – Microsoft Front Page (OAD238)
Judicial Reporting	Realtime Theory I (IRT121) Realtime Theory II (IRT122) Speed Building I (IRT129) Speed Building II (IRT130) Speed Building III (IRT123) Realtime Software Applications (IRT229) Judicial Procedures (IRT230) Legal Terminology (IRT131) Communication and Transcription Skills (OAD130) Realtime Writing Elective or Technical Track Elective IRT Internship (IRT232)
Legal Assisting	Legal Transcription (OAD239) Legal Office Procedures (OAD224) Legal Research and Writing (OAD235) Legal Office Applications (OAD237) Legal Terminology (IRT130)

* These programs offer professional development for those already employed in the field and may also serve as a starting point for those considering the pursuit of a full associate degree program. Existing knowledge or skill base is assumed for certain courses. Absence of same may require prerequisite coursework. Applicants must secure department chair or academic dean approval before completing the registration process. Non-degree seeking students may not be eligible for financial aid.

** AWS testing also available at applicable course completion

*** A prerequisite may be required depending upon your placement test score.

\+ Web 3 - these courses are 100% Internet-based training courses

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Certificates of Competency*

Business Technologies

ADMINISTRATIVE INFORMATION *(Continued)*

Realtime Transcription	Realtime Theory I (IRT121) Realtime Theory II (IRT122) Speed Building I (IRT129) Speed Building II (IRT130 - *Must pass Realtime Speed Requirements)*

MANAGEMENT AND MARKETING

Entrepreneurship	Entrepreneurship (ENT120) Entrepreneurship Marketing (ENT121) Entrepreneurship Finance (ENT221) New Venture Creation (ENT222) Entrepreneurship Practicum (ENT223)
International Business	International Business (MGT232) International Economics (BUS223) International Law (ACC134)
Quality Management	Principles of Management (MGT121) Supervision (MGT221) Business Decision-Making (MGT233) Operations Management (MGT227)
Sales	Sales (MKT221) Consumer Behavior (MKT227) Principles of Marketing (MKT121) Supply Chain Management (MKT226)
Supervision	Principles of Management (MGT121) Supervision (MGT221) Cultural Diversity (SOC225) Effective Speaking (COM121)

Engineering Technologies

APPLIED INDUSTRIAL TECHNOLOGY

Basic Industrial Maintenance	Intro to Algebra (MTH101) Electrical Circuits and Devices (EST130) Hydraulic and Pneumatic Systems (MST134) Blueprint Reading (MST121)
Basic Robotics	Introduction to Robotics (IET228) Mechanical Drives (MST221) Programming Logic Fundamentals (ECA127) Electrical Circuits and Devices (EST130)
Industrial Hydraulics and Pneumatics	Hydraulic and Pneumatic Systems (MST134) Basic Pumps (MST125) *(8 wks)* Pipefitting Principles and Applications (MST126) *(8 wks)* Plumbing and Pipe Code Principles (MST135)

* These programs offer professional development for those already employed in the field and may also serve as a starting point for those considering the pursuit of a full associate degree program. Existing knowledge or skill base is assumed for certain courses. Absence of same may require prerequisite coursework. Applicants must secure department chair or academic dean approval before completing the registration process. Non-degree seeking students may not be eligible for financial aid.

** AWS testing also available at applicable course completion

*** A prerequisite may be required depending upon your placement test score.

\+ Web 3 - these courses are 100% Internet-based training courses

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Certificates of Competency*

Engineering Technologies

APPLIED INDUSTRIAL TECHNOLOGY	*(Continued)*
Mechanical Drive Systems	Blueprint Reading (MST121) Mechanical Drive Components (MST221) Basic Pumps (MST125) Hydraulic and Pneumatic Systems (MST134)
Precision Machining and CNC Programming	Machine Tools (AIT122) Advanced Machine Tools (AIT123) CNC Programming (AIT121)
Quality Assurance Specialist	Statistical Process Control (MST131) Dimensional Metrology and Inspection I (IET270) Quality Systems, Audits, and Certifications (IET268)
Welding (MIG, TIG, or SMAW)	Principles of Welding (MST127)** Welding Lab (MST128)**
	Choose <u>one</u> of the three below depending on your area of focus:
	Tungsten Inert Gas Welding (TIG) (MST226)** Metal Inert Gas Welding (MIG) (MST227)** Shielded Metal Arc Welding (SMAW) I (MST228)**
CIVIL ENGINEERING TECHNOLOGY	
Architectural Drafting	Architectural Drafting I (CET122) Architectural Drafting II (CET123) Basic AutoCAD (DET125) A/E CAD (CET 234) Building Materials and Construction Methods (CET121)
Civil/Surveying	Surveying I (CET227) Surveying II (CET228) Surveying III (CET229) Surveying Graphics (CET221) Global Positioning System (CET236)
Civil/Surveying Drafting	Interpreting Construction Documents (CET237) Highway and Map Drawing (CET124) Basic AutoCAD (DET125) Surveying Graphics (CET221) Building Materials and Construction Methods (CET121)
Construction Materials Inspection	Building Materials and Construction Methods (CET121) Concrete and Asphalt Testing (CET222) Soil Mechanics (CET125)
Construction Technician	Building Materials and Construction Methods (CET121) Interpreting Construction Documents (CET237) Construction Management, Job Cost and Safety (CET235) Computer Applications for Technical Professionals (ECA122) Basic AutoCAD (DET125)

* These programs offer professional development for those already employed in the field and may also serve as a starting point for those considering the pursuit of a full associate degree program. Existing knowledge or skill base is assumed for certain courses. Absence of same may require prerequisite coursework. Applicants must secure department chair or academic dean approval before completing the registration process. Non-degree seeking students may not be eligible for financial aid.

** AWS testing also available at applicable course completion

*** A prerequisite may be required depending upon your placement test score.

\+ Web 3 - these courses are 100% Internet-based training courses

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Certificates of Competency*

Engineering Technologies

DESIGN ENGINEERING TECHNOLOGY

Advanced CAD	Basic AutoCAD (DET125) Customizing AutoCAD (DET126) Advanced AutoCAD (Inventor) (DET230) Engineering Drawing (DET121) Pro Engineer (DET131)
AutoCAD	Basic AutoCAD (DET125) Customizing AutoCAD (DET126) Advanced AutoCAD (Inventor) (DET230)
Precision Gauging and Inspection	Engineering Drawing (DET121) Working Drawings (DET124) Basic AutoCAD (DET125) Tool Design (DET231) Geometric Dimensioning and Tolerancing (DET226) Dimensional Metrology and Inspection (IET270)

ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY

Electrical/Electronic Troubleshooting	College Algebra and Trigonometry I (MTH121)*** DC Circuit Analysis (EET120) AC Circuit Analysis (EET122) Electronic Devices and Circuits (EET123)
Industrial Controls	College Algebra and Trigonometry I (MTH121)*** DC Circuit Analysis (EET120) AC Circuit Analysis (EET122) Electrical Machines (EET126) PLCs and Industrial Controls I (EET227) PLCs and Industrial Controls II (EET228)
Industrial Electricity and Electronics	College Algebra and Trigonometry I (MTH121)*** DC Circuit Analysis (EET120) AC Circuit Analysis (EET122) Electronic Devices and Circuits (EET123) Industrial Electronics (EET232) National Electric Code (EET128)

ENVIRONMENTAL, HEALTH AND SAFETY

Water Operations	Water / Wastewater Math and Chemistry (ENV163) Water/Wastewater – Permits and Administration (ENV129)+ Water Treatment I(ENV136)+ Pumps, Maintenance & Safety (ENV130)+ Technical Elective(s) 1 Water Treatment II (ENV137)+ Water Distribution Systems(ENV138) + Water Analysis (ENV139)+ Water Certification Examination Preparation(ENV127)

* These programs offer professional development for those already employed in the field and may also serve as a starting point for those considering the pursuit of a full associate degree program. Existing knowledge or skill base is assumed for certain courses. Absence of same may require prerequisite coursework. Applicants must secure department chair or academic dean approval before completing the registration process. Non-degree seeking students may not be eligible for financial aid.

** AWS testing also available at applicable course completion

*** A prerequisite may be required depending upon your placement test score.

\+ Web 3 - these courses are 100% Internet-based training courses

In an effort to meet the needs of students, courses required in each of the programs are scheduled in sequence to accommodate those attending on a full-time or part-time basis. All students should consult their academic advisors to plan their schedules and course sequence appropriately.

Certificates of Competency*

Engineering Technologies

ENVIRONMENTAL, HEALTH AND SAFETY	*(Continued)*
Wastewater Operations	Water/Wastewater Math and Chemistry (ENV163) Water / Wastewater – Permits and Administration (ENV129) + Wastewater Treatment I (ENV131)+ Pumps, Maintenance and Safety(ENV130) + Wastewater Treatment - Industrial (ENV133)+ Wastewater Treatment II (ENV132)+ Wastewater Collection Systems (ENV134)+ Wastewater Analysis (ENV135)+ Wastewater Certification Examination Preparation (128)+
HEATING, VENTILATING, AND AIR CONDITIONING TECHNOLOGY	
Commercial Refrigeration	Introduction to Algebra (MTH101) Refrigeration(HVC235) HVAC Electrical Systems and Applications (HVC234)
HVAC Design and Application Technician	HVAC Design and Application (HVC222) Advanced HVAC Applications (HVC232) Refrigeration (HVC235) Building Materials and Construction(CET121)
HVAC/R Electrical Systems	Introduction to Algebra (MTH101) HVAC Electrical Systems and Applications (HVC234) Advanced HVAC Electrical Applications (HVC236)
HVAC Technician (Level I)	HVAC Principles I (HVC121 HVAC Principles II (HVC122) HVAC Field Installation Techniques and Procedures (HVC227) HVAC Electrical Systems and Applications (HVAC234)
HVAC Technician (Level II)	Blueprint Reading (MST121) Pipefitting Principles and Applications (MST126) HVAC Design and Application (HVC222) HVAC System Operation and Troubleshooting- Heating (HVC223) HVAC System Operation and Troubleshooting- Cooling (HVC224)
High Pressure Boiler Operator	High Pressure Steamplant Operation (AIT 128)
Low Pressure Boiler Operator	Low Pressure Steamplant Operations (AIT127)
Steamplant Engineering	Stationary Steamplant Engineering (AIT129)
MECHANICAL ENGINEERING TECHNOLOGY	
Machine Design	Advanced Strength of Materials (MET221) Machine Design (MET228) Technical Project (MET226)
Mechanical Power	Machine Design (MET122) Fluid Power (MET222) Electrical Circuits and Devices (EST130)

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** AWS testing also available at applicable course completion

*** A prerequisite may be required depending upon your placement test score.

\+ Web 3 - these courses are 100% Internet-based training courses

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Certificates of Competency*

Information Technologies

COMPUTER NETWORK ADMINISTRATION AND SECURITY TECHNOLOGY

Microsoft® Windows 2003 Server	PC Upgrading and Maintenance (ECA145) Introduction to Computer Networking (ECA146) Windows XP Professional and 2003 Server (ECA131) Windows 2003 Server Network Infrastructure (ECA244) Designing Security for Windows 2003 Server (ECA245) Directory Services and Exchange Server (ECA246)
Cisco Networking	PC Upgrading and Maintenance (ECA145) Introduction to Computer Networking (ECA146) CCNA Phase I (ECA134) CCNA Phase II (ECA135) Windows® 2003 Server Network Infrastructure (ECA244) CCNA Phases III and IV (ECA250) Firewall and Networking Security (ECA278)
UNIX/LINUX Administration	Unix/Linux Operating Environment (ECA277) Unix/Linux System Administration (ECA274) Unix/Linux Network Administration (ECA276) Unix/Linux Shell Scripting (ECA254)

COMPUTER PROGRAMMING AND DATABASE TECHNOLOGY

Oracle® 9i Database	Data Modeling and Database Design (ECA253) Introduction to Oracle®: SQL (CAP139) Oracle® Architecture and Administration (CAP142) Oracle® Performance and Tuning (CAP249) Oracle® Backup and Recovery (CAP250) Data Mining and Data Warehousing (ECA252)
Oracle® 9i Developer	Data Modeling and Database Design (ECA253) Introduction to Oracle®: SQL (CAP139) Developing PL/SQL Programming Units (CAP141) Oracle® Forms and Reports (CAP248) Data Mining and Data Warehousing (ECA252)
Microsoft® SQL Server	Data Modeling and Database Design (ECA253) Microsoft®SQL Server Database Analysis Services (ECA269) Microsoft®SQL Server Database Reporting Services (ECA272) Microsoft SQL Server Database Design and Implementation (ECA139) Microsoft® Access Database (ECA152)

COMPUTER SCIENCE AND ENGINEERING TECHNOLOGY

C++ Programming	C++ Programming (ECA222) Advanced C++ Programming (ECA224) Data Modeling and Database Design (ECA253)
C# Programming	Microsoft® Windows Programming with C# (ECA226) Microsoft Server Side Scripting (ECA229) Data Modeling and Database Design (ECA253)

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Certificates of Competency*

Information Technologies

COMPUTER SCIENCE AND ENGINEERING TECHNOLOGY *(Continued)*

Java Programming	Data Modeling and Database Design (ECA253) Java Programming (ECA223) Java Web Database Programming (ECA230) Advanced Java Programming (ECA239)
Video Game Design	Game Design (ECA156) 3D Graphics Modeling (IMT125) 3D Graphics Animation (IMT227) Advanced 3D Graphics Modeling (IMT240) Advanced 3D Graphics Animation (IMT228)
Video Game Programming	C++ Programming (ECA222) Advanced C++ Programming (ECA224) 3D Game Programming (ECA241) Advanced Gaming and Simulation Topics (ECA240) 2D Game Programming (ECA281)

COMPUTER TECHNOLOGY

Help Desk and Computer User Support	Help Desk Concepts (ECA132) Computer User Support (ECA133) Computer Applications for Technical Professionals (ECA122) Advanced Microcomputer Applications (ECA147) Spreadsheet Analysis (ECA148) Microsoft® Access Database (ECA152)
Microsoft® Application Professional	Computer Applications for Technical Professionals (ECA122) Advanced Microcomputer Applications (ECA147) Spreadsheet Analysis (ECA148) Microsoft® Access Database (ECA152)

E-COMMERCE TECHNOLOGY

Advanced Webmaster	Microsoft® Serve Side Scripting (ECA229) Open Source Server Side Scripting (ECA236) Advanced Web Development (ECA234) Advanced XML and Web Services (ECA247) Microsoft SQL Server Database Design and Implementation (ECA139)
Management Information Systems –MIS	Visual Basic Programming (ECA128) Java Programming (ECA223) Java Web Database Programming (ECA230) Analyzing Software Requirements and Developing Solutions (ECA233) Microsoft® Project Tools (ECA255)
Visual Basic Programming	Data Modeling and Database Design (ECA253) Programming Logic and Problem Solving (ECA127) Visual Basic Programming (ECA128) Microsoft® Server Side Scripting (ECA229) Advanced XML and Web Services (ECA247)

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Certificates of Competency*

Information Technologies

E-COMMERCE TECHNOLOGY *(Continued)*

Web Graphics	Web Design (ECA138) Graphic Arts Design (IMT122) Internet Design Tools (ECA154) Flash Animation and Design (ECA155) Graphics for Illustration (IMT253)
Web Server	Intro to Computer Networking (ECA146) PC Upgrading and Maintenance (ECA145) Unix/Linux Operating Environment (ECA277) Unix/Linux Network Administration (ECA276) Web Server Administration (ECA279) MS Windows® Server 2003 Networking and Infrastructure (ECA244)
Webmaster	Internet/Intranet Design and Development (ECA228) Client Side Scripting (ECA225) Internet Design Tools (ECA154) Flash Animation and Design (ECA155) Flash Web Programming (ECA282)

INTERACTIVE MEDIA TECHNOLOGY

Commercial Music Production	Theory and Composition (IMT229) Music Synthesis (IMT239) Sequencing and MIDI Samples (IMT231) Music Technology (IMT130) Digital Audio Recording and Editing (IMT129)
Interactive Media	Graphics Arts Design I (IMT122) 3D Graphics Modeling (IMT125) Flash Animation (ECA155) Digital Audio Recording and Editing (IMT129) Digital Video Recording and Editing (IMT223) Writing for Media (ENG227)
Video Production and Editing	Digital Audio Recording and Editing (IMT129 - Fall) Digital Video Recording and Editing (IMT223 - Fall) Compositing (IMT237 - Spring) Advanced Video Production (IMT238 - Spring)
3D Modeling and Animation	3D Graphics for Modeling (IMT125) Graphics for Illustration (IMT253) 3D Graphics Animation (IMT227) Textures for 2D and 3D Design (IMT249)
Graphics for Design	Graphic Arts Design II (IMT245) Graphics for Illustration (IMT253) Color Theory and Design (IMT131) Textures for 2D and 3D Design (IMT249)
Cisco CCNA Certification	
Microsoft® MCAD Certification	
Microsoft® MCDBA Certification	
Microsoft® MCSE Certification	
Microsoft® MCSD Certification	

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Web-Based Learning

E-Learning at Stark State College

E-Learning is a unique alternative to traditional on-campus courses. It furthers the College goal of increasing access to higher education. It affords the student the opportunity to learn with flexibility of time and place while maintaining access to faculty and other College services.

The vision for E-Learning at Stark State College is to offer high quality distance learning programs which increase accessibility of education and technological literacy for a diverse population.

Stark State's goal is to offer all students the opportunity to experience E-Learning in a variety of formats, including: Web-delivered classes which are offered through the Web (perhaps with the exception of tests), and Web-enabled classes which include a blend of both E-Learning through the Web and traditional face-to-face learning.

Earn a bachelor's degree online at Stark State College

In most of the associate degree programs, all or nearly all courses may be applied toward a bachelor's degree. Bachelor's degree requirements and course transferability are controlled by the institution to which the student plans to transfer and students are urged to discuss transferability of credits with the college or university to which they plan to transfer.

To be eligible for online studies, students must have access to a computer that has an Internet connection, such as an online computer at home or Stark State computer labs. Students also need a permanent email address. Many email providers offer free email addresses. Our computer lab instructors and Office of Admissions/Student Services staff can help students get started.

Stark State has, for many years, offered transfer and articulated degree programs with numerous colleges and universities, but those listed on the following pages specifically offer online bachelor's degree programs to Stark State students.

Division of Corporate and Community Services

Stark State College of Technology's Division of Corporate and Community Services provides continuing education, contract training, certification and labor-management assistance to the community through:

- continuing education classes, workshops/seminars
- corporate services/training and assessment services
- computer certification tests, and
- Northeast Ohio Labor-Management Council

CONTINUING EDUCATION CLASSES, WORKSHOPS AND SEMINARS

The Division of Corporate and Community Services offers a full range of continuing education classes, workshops and seminars that can help participants increase their job skills, prepare for a new career, or enrich their personal lives. Most programs are held at the Advanced Technology Center.

Continuing education classes are available to meet the mandatory continuing education licensure requirements of professionals in a variety of fields, such as social work, counseling, health care, and water/wastewater management. In addition, programs for children are offered during the summer.

Each semester, the College publishes a schedule of continuing education classes. For more information, or to request a schedule, call 330-966-5455 or visit ***www.starkstate.edu./continuinged***.

CORPORATE SERVICES/TRAINING AND ASSESSMENT SERVICES

In addition to continuing education, the Division of Corporate and Community Services offers contract training programs to business, industry, health care facilities and non-profit organizations. Contract training services are convenient, cost-effective and customized to meet the unique needs of individual companies, and are held on campus or at the company location. Our highly qualified instructors and staff will help assess your training needs and design technical and human resource programs to satisfy those needs. A variety of assessments are available so incoming students can find the right program to match their current level of capability.

The Division of Corporate and Community Services also operates an ISO 9001/2000 consortium program that assists companies to become ISO compliant and/or certified. For more information about contract training services, call 330-966-5465.

CERTIFICATES OF COMPLETION

The Division of Corporate and Community Services awards certificates to students for satisfactory completion of continuing education classes. The College follows national guidelines for continuing education and is a member of the Ohio Continuing Higher Education Association (OCHEA) and EnterpriseOhio. In order to achieve satisfactory completion, students must attend at least 80% of the continuing education classes. In addition, specially-approved, certified contact hours are awarded for courses and disciplines that have specific criteria for continuing education credit.

Specific testing services are available to allow individuals to achieve certification in a number of MOS, MCSE and CompTIA disciplines as well as others. Contact the Continuing Education Office at 330-966-5455 for more information or to schedule a certification test.

CONTINUING EDUCATION UNITS (CEUs)

Continuing education units (CEUs) are issued for most continuing education and contract training courses.

The CEU is a national uniform unit of measurement for continuing education programs. One continuing education unit is awarded for 10 contact hours of participation in a continuing education class or organized experience under qualified instruction. The College's Academic Records/Registrar's Office maintains a record for each student who completes a course or program that awards CEUs. The continuing education student must submit a written request to the Academic Records/Registrar's Office to obtain a copy of the official transcript.

NORTHEAST OHIO LABOR-MANAGEMENT (NEOLM)

The Northeast Ohio Labor-Management is housed in the College's Advanced Technology Center. The goal of the NEOLM is to create harmony between labor and management and to enhance economic development in Stark and surrounding counties. The NEOLM Board of Directors is comprised of top union, management, public sector and governmental executives. The Council provides seminars and workshops to enhance labor management relationships. It also provides customer-focused, neutral, cost-effective training facilitation and consulting services. For more information about the Council, call 330-494-6170, Ext. 4505.

OHIO PEACE OFFICER LAW ENFORCEMENT TRAINING ACADEMY

Stark State College, in cooperation with the Ohio Peace Officer Training Commission and the Ohio Attorney General's Office, offers the Ohio Peace Officer Certification Training.

This course assists individuals interested in becoming municipal, township, or village police officers; deputy sheriffs; and state wildlife officers, as well as other law enforcement positions. The Stark State College program also fulfills the requirements for sworn officers to be certified.

Our Academy is of the highest caliber with professional staff members averaging over 20 years of law enforcement experience. Additional instructional staff are attorneys from the Prosecutor's Office, criminologists from the Canton-Stark County Crime Lab, and a variety of select personnel from surrounding law enforcement agencies.

Call the Office of Continuing Education at 330-966-5455 for program requirements.

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Course Descriptions

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- ACC - Accounting
- AIT - Applied Industrial Technology
- AUT - Automotive
- BCA - Business Computer Applications
- BIO - Biology
- BST - Biotechnology
- BTD - Business Technologies Special Courses
- BUS - Business Technology
- CAP - Computer Technology
- CET - Civil Engineering Technology
- CHM - Chemistry
- COM - Communications
- DET - Design Engineering Technology
- DHY - Dental Hygiene
- ECA - Engineering Computers
- ECE - Early Childhood Education
- EET - Electrical/Electronic Engineering Technology
- EMS - Emergency Medical
- ENG - English
- ENT - Entrepreneurial
- ENV - Environmental
- EST - Electrical Maintenance
- ETD - Engineering Technology Special Courses
- EUT - Electrical Power Utility
- FIN - Finance
- FST - Fire Services
- GSD - General Studies Special Courses
- HIT - Health Information
- HTD - Health Technology Special Courses
- HVC - Heating, Ventilation and Air Conditioning
- IDS - Interdisciplinary Studies
- IET - Industrial Engineering Technology
- IMT - Interactive Media
- IRT - Information Reporting
- MAS - Massage Therapy
- MAT - Medical Assisting
- MET - Mechanical Engineering Technology
- MGT - Management
- MIS - Medical Instruments
- MKT - Marketing
- MLT - Medical Laboratory Technology
- MST - Mechanical Service
- MTC - Medical Transcription
- MTH - Mathematics
- NUR - Nursing (ADN)
- OAD - Administrative Information
- OTA - Occupational Therapy
- PHL - Philosophy
- PHY - Physics
- PSC - Political Science
- PSY - Psychology
- PTA - Physical Therapist Assistant
- RCT - Respiratory Care
- SOC - Social Sciences
- SWK - Human and Social Service

All academic units are expressed in terms of "credit hours". Stark State College defines a "credit hour" based on the requirements of the Ohio Board of Regents.

"Contact hours" may involve lecture, laboratory activities, clinical practice and/or instructor-directed activities.

For the most current course descriptions and for additions made after publication, check the Web site at www.starkstate.edu/courses.

Accounting Technology

ACC121
PRINCIPLES OF ACCOUNTING I 4 4
Co-Reg: BUS123
This course is the first part of a two-semester sequence which introduces students to generally accepted accounting principles and practices in financial accounting as applied in business organizations. Upon completion of this course, students should be able to prepare financial statements and understand their uses.

ACC122
PRINCIPLES OF ACCOUNTING II 4 4
Pre-Req: ACC121
This course is the second part of a two-semester course in financial accounting. The understanding and application of generally accepted accounting principles is continued and further explored as they apply to assets, claims to assets, revenue and expenses. Upon completion of this course, students should be able to complete the entire accounting cycle from transactions to financial statements using a computerized practice set.

ACC124
INDIVIDUAL TAXATION 4 4
Pre-Req: BUS123
This is the first course of a two-course sequence in federal income taxation. Principles of individual taxation, taxation systems, simple tax scenario analysis, and computations of gains and losses are discussed, as well as their classifications and placement in the tax formula. On completion, students should be able to analyze simple tax transactions and determine their impact on an individual's tax liability.

ACC127
QUANTITATIVE BUSINESS STATISTIC 3 3
Pre-Req: BUS123
This first half of the course covers simple interest and time value of money applications including present and future value of an amount, an ordinary annuity, a deferred annuity and an annuity due. The second half covers the study of statistics including the collection arrangement of data, measures of central tendency and dispersion, probability and linear regression. Emphasis is placed on business applications utilizing these techniques. Upon completion of this course, students should be able to apply these techniques and analyze the results.

ACC130
BUSINESS LAW AND ETHICS 3 3
An examination of the functions of the courts in the business environment. This course includes the study of traditional business law topics and other basic topics applicable to business. A close examination of the intersection between professional ethical decision-making and the legal system as it applies to business. Upon completion, students should be able to demonstrate competence in the understanding of the business law and ethical areas mentioned above.

ACC132
FINANCIAL ACCOUNTING 4 4
Pre-Req: BUS123
The course introduces the student to the fundamental processes of accounting through coverage of the accounting cycle consisting of transaction analysis, the recording function and financial statement preparation and analysis. Course coverage continues with a review of receivables; inventory; property, plant and equipment; bonds and stockholder's equity. Upon completion of this course, students should be able to demonstrate competence in applying financial accounting principles and procedures and understand their financial statement impact. ACC121 and ACC122 may be substituted for this course.

ACC133
MANAGERIAL ACCOUNTING 4 4
Pre-Req: ACC122 or ACC132
The emphasis in this course is on the use of accounting information as an internal tool for planning and control. Course coverage includes the statement of cash flows, ratios, cost behavior, cost accumulation and reporting, cost-volume-profit analysis, budgeting, and other decision criteria. While primary coverage will be of this material in a manufacturing setting, service and merchandising applications will also be presented. Upon completion of this course, students should be able to apply the fundamental concepts of managerial accounting to a variety of business decisions.

ACC134
INTERNATIONAL LAW 3 3
Pre-Req: ACC130
The law and international transactions are explored. Also covered are sovereignty, treaties, agreements, antitrust practices, property rights and international arbitration. Upon completion of this course, students should be able to understand the sources of international law and its impact on businesses with international transactions.

ACC221
INTERMEDIATE ACCOUNTING I 4 4
Pre-Req: ACC122 or ACC132
Co-Req: ACC127
This is the first in a two-course sequence in the detailed study of accounting theory. It is a study of conceptual framework of accounting, disclosure standards for general purpose financial statements, and measurement standards for assets, current liabilities, and associated revenues and expenses, including application of compound interest techniques. Upon completion, students should be able to demonstrate competence in applying generally accepted accounting principles in the preparation of financial statements as related to these assets and current liabilities.

ACC222
INTERMEDIATE ACCOUNTING II 4 4
Pre-Req: ACC221
This is the completion of a two-course sequence in the study of accounting theory. In this semester, students become more involved in the discussion of the intention of management in engaging in certain types of transactions and the impact of alternate methods of reporting in the financial statements. The subject areas studied include long-term debt, intercorporate investments, corporate equity matters, earnings per share, revenue recognition, pensions, leases, cash flow statements, and accounting for income taxes. Some review items include certain analytical ratios and other concepts underlying the preparation of meaningful and complete financial statements. Upon completion of the course, students should be able to demonstrate competence in recognition of important disclosures in financial statements, discuss and evaluate alternative accounting methods and apply generally accepted accounting principles to the preparation of financial statements, including the statement of cash flows.

ACC223
COST ACCOUNTING 4 4
Pre-Req: ACC127, ACC133
This course in cost accounting places an emphasis on manufacturing and service organizations. Course coverage includes job-order costing, process costing, activity-based costing/activity-based management, standard costing and analysis of cost variances. Upon completion of this course, students should be able to apply the fundamental concepts of cost accounting to a variety of business decisions.

ACC225
AUDITING 4 4
Co-Req: ACC222
Emphasis is placed on the philosophy and environment of the public accounting profession, with special attention paid to the nature and economic purpose of audit and assurance services, professional standards, professional conduct, legal liability, audit evidence, audit planning, consideration of internal control, audit sampling and audit workpapers. Upon completion, students should be able to demonstrate competence in applying the generally accepted auditing standards and the procedures for conducting audits of public and non-public companies.

ACC226
ADVANCED ACCOUNTING 4 4
Co-Req: ACC222
The study of consolidated financial statements is the primary concentration of this course. Fundamentals of fair value and equity accounting methods are reviewed, and students are exposed to the processes for consolidation of different entities and the appropriate financial statement considerations and disclosure requirements. Topics include valuation of acquired net assets, recognition of goodwill, the allocation of the purchase price to various elements of the balance sheet, and the elimination of inter-corporate transactions in the preparation of consolidated statements. Upon completion, students should be able to discuss the permissible methods of consolidation and indicate the ability to complete a consolidation worksheet and prepare the necessary supporting schedules related to the statements. Topics also include accounting for partnership formation and liquidation, changes in partners through retirement and/or selling all or a portion of their interest is also studied.

ACC227
PAYROLL ACCOUNTING 3 3
Pre-Req: ACC122 or ACC132
This course is the first course in a two-course sequence in payroll accounting. This course is forward to the Fundamental Payroll Certification, and upon completion of the two courses the students should be prepared to take the Fundamental Payroll Exam, administered by the American Payroll Association. Specifically, this course covers the study of payroll, record keeping regulations, reporting requirements, accounting procedures, and mandatory deduction of the various taxes. Also covered is the employer's related taxes and the preparation of various payroll tax forms, the Fair Labor Standards Act, and other federal and state laws that regulate payroll.

ACC228
BUSINESS TAXATION 4 4
Pre-Req: ACC132, ACC124
This is an elective, second-semester course in the taxation sequence. The principles of taxation developed in the first semester are developed more fully, and more complex problems are analyzed. There is an introduction to the taxation of corporations, partnerships, estates, trusts, and gifts. Upon completion of the course, the student should be able to analyze complex taxation scenarios of various forms of a business entity and determine their impact on the entity's liability. There is a study of taxation of not-for-profit organizations. All major tax forms are covered for corporations, partnerships and not-for-profit organizations.

ACC229
COMPUTERIZED ACCOUNTING APPLICATION 3 4
Pre-Req: ACC122 or ACC132
This is an elective course in accounting for students in the corporate option of the program. The course involves the application of the student's accounting knowledge in a computerized setting. The student will record and report accounting information using various commercial accounting packages, including but not limited to QuickBooks Pro and Excel, and be exercised in problem solving and meeting project deadlines throughout the course. Upon completion, the student should have a functional knowledge of computerized accounting applications and procedures.

ACC232
GOVERNMENT AND NOT-FOR-PROFIT ACCOUNTING 4 4
Pre-Req: ACC122 or ACC132
This is an elective course in accounting for students in the CPA option of the program. Upon completion, the student should have a working knowledge of the budgetary and operational accounting of governmental entities, as well as the extensive reporting required for Comprehensive Annual Financial Report (CAFR). As part of the course students are required to complete an extensive computer application project governmental accounting and financial reporting. Students should have the proficiency to prepare and interpret accounting and financial reporting information of various not-for-profit organizations as well as health care organizations and educational institutions.

ACC233
ADVANCED TAXATION TOPICS 4 4
Pre-Req: ACC122 or ACC132
This course is the capstone course for the Enrolled Agent Certification. The course expands the concepts of individual and business taxation, estate, trust, and gift taxation and not-for-profit taxation that were covered in Advanced Taxation. Tax planning for individuals, businesses, estates and trusts and gifting will be emphasized. This course is geared toward the Enrolled Agent Examination, administered by the Internal Revenue Service, and upon completion of this course the student should be prepared to take the test.

ACC234
ADVANCED PAYROLL 3 3
Pre-Req: ACC227
This course is a continuation of payroll accounting. It is the second course in a two-course sequence. Emphasis is placed on payroll laws and Federal Acts. Payroll Accounting Systems are discussed in detail. Additional topics include employee versus independent contractor, special pay situations, self-employed, payment of federal payroll taxes, penalties, taxable fringe benefits, supplemental pay, the gross-up of supplemental pay, advanced earned income credit. The completion of Federal State and Local Payroll Tax Forms will be reviewed and practiced including Form 941, W-2, W-3, 1099, 1096, W-4, W-5, State Unemployment, Bureau of Workers Compensation, State Income Tax Withholding and Local Income Tax Withholding. This course is geared to the Fundamental Payroll Certification and upon completion of this course, the student should be prepared to take the Fundamental Payroll Exam, administered by the American Payroll Association.

ACC235
FORENSIC ACCOUNTING AND FRAUD INVESTIGATION 3 3
This course provides an introduction to the areas of forensic accounting and fraud investigation including basic accounting principles as they apply to forensic accounting, the most common types of fraud, how different types of fraud occur and how to detect fraud, gather evidence and document findings. Upon completion of this course, students should be familiar with the basic concepts of forensic accounting and fraud prevention and detection.

ACC236
CYBER LAW AND ETHICS 3 3
This course will provide the student with a thorough preparation "from a business and social perspective" in the law of the cyber world. The design of Cyberlaw and Ethics provides the student with a knowledge base in the context of analysis and problem solving in preparation for entry into the business cyber world and, for those students already employed in business, provides enriched perspectives to enable the business-career employed student to function more effectively.

ACC237
FRAUD EXAMINATION 4 4
Pre-Req: ACC133
This course covers the nature of fraud and the responsibility of management for fraud prevention and detection. Special emphasis is given to the design of internal control systems, the identification of material weaknesses in internal controls and the additional responsibilities imposed on management under the provisions of Sarbanes-Oxley. Upon completion of this course, students should be familiar with the basic concepts of fraud prevention and detection.

Applied Industrial Technology

AIT122
MACHINE TOOLS — Credit Hours: 3 — Contact Hours: 5
With assigned lab projects, the student will cover basic machine operations used in area industries. Topics include safety, basic machines, precision tools, layout procedures, cutting tools and various machine setups to accomplish laboratory projects. Inspection and quality control will be stressed.

AIT123
ADVANCED MACHINE TOOLS — Credit Hours: 4 — Contact Hours: 6
Pre-Req: AIT122
With assigned lab projects, the student will cover advanced machine operations not possible in the beginning course. In-depth coverage of inspection and quality-control precision tools for students with basic knowledge of the trade. Specialized processes such as indexing, gear-cutting, technology of cutting tools and basic exposure to computer numerical control machines.

AIT124
PRINCIPLES OF RIGGING — Credit Hours: 2 — Contact Hours: 2
Provides a study of safe rigging principles, practices, and equipment. Topics of study include fiber and wire rope, block and tackle, lift and rigging chain, proof test, safe working load, design factor, sling geometry, fittings, and lifting and moving equipment.

AIT125
COMMERCIAL PLUMBING — Credit Hours: 3 — Contact Hours: 3
This course is designed to provide the student with an overview of the tools, materials, fixtures, practices, and processes used in commercial and residential plumbing. A focus on design and utilization with respect to traps, drains, vents, sizing, and overall codes will be addressed. Joining, design characteristics, and application for the various types of plumbing are also covered in detail.

AIT126
INDUSTRIAL ELECTRICAL APPLICATIONS AND SAFETY — Credit Hours: 2 — Contact Hours: 3
This course covers an overview of basic commercial/industrial electrical applications. Topics include safe industrial/commercial: electrical principles and applications, wiring techniques and procedures, and basic parallel and series circuits. Safe and effective multimeter usage and industrial instrumentation.

AIT127
LOW PRESSURE STEAMPLANT OPERATIONS — Credit Hours: 3 — Contact Hours: 4
This course covers the principles and applications of low pressure (15 psi or less) boiler operation and construction. Principles and applications of maintenance and safety are also covered in detail. This course also counts toward the overall hours toward taking your low psi boiler operator's license and helps to prepare you to take the test. This course counts for 1,400 hours of the state-required experience hours needed to apply to take the low pressure boiler operator's licensure test.

AIT128
HIGH PRESSURE STEAMPLANT OPERATIONS — Credit Hours: 3 — Contact Hours: 4
This course covers the principles and applications of high pressure (15 psi or more) boiler operation. Topics include: boiler feed pumps and fuel feeder, feedwater heaters and feedwater treatment, and fuel combustion. Principles and applications of maintenance and safety are also covered in detail. This course also counts toward the overall hours towards taking your high psi boiler operator's license and helps to prepare you to take the test. This course counts for 1,100 hours of the state-required experience hours needed to apply to take the high pressure boiler operator's licensure test.

AIT129
STATIONARY STEAMPLANT ENGINEERING — Credit Hours: 3 — Contact Hours: 4
This course covers the principles and applications of Ohio code law for boiler operation, abatement equipment, boiler design and application mathematics, duplex pump and steam engine. This course counts for 1,000 hours of the state-required experience hours needed to apply to take the third-class stationary engineer's state license exam.

AIT130
STRUCTURAL/MAINTENANCE WELDING — Credit Hours: 3 — Contact Hours: 5
This course will cover safe working procedures of structural/maintenance welding and the student will lay out and set up various structural welding scenarios using gussets, back plates, and other standard repair implements. They will be supervised for proper form and procedure while performing the required practices in lab. The preparation, cutting and joining of carbon steel (A-36) using oxy/acetylene gas and SMAW (DCEP) electric arc in the flat, horizontal, vertical and overhead positions will also be performed.

AIT131
ELECTRICAL APPLICATIONS AND SAFETY — Credit Hours: 2 — Contact Hours: 2
This course provides the knowledge and skills required to understand, safely service and troubleshoot basic electrical circuits. Basic electricity and DC circuits, as well as proper meter use, are explained. The relationship and understanding of current, voltage, and power schematics, troubleshooting basic electricity, digital concepts, PLC concepts and electronics are covered.

AIT132
STATIONARY STEAMPLANT ENGINERG — Credit Hours: 6 — Contact Hours: 8
This course covers the principles and applications of Ohio code law for boiler operation, abatement equipment, boiler design and application mathematics, duplex pump and steam engine. This course counts for 1,000 hours of the state-required experience hours needed to apply to take the third-class stationary engineer's state license exam.

AIT133
ADVANCED ELECTRICAL APPLICATIONS AND SAFETY — Credit Hours: 2 — Contact Hours: 2
Pre-Req: AIT131
This course is designed specifically for non-electrical personnel looking to gain advanced knowledge of circuit analysis and an understanding of analog signals used for instrumentation devices. This course will also provide switching, programming logic controller (PLC), and basic logic concepts and fundamentals of computer based systems.

AIT221
ADVANCED CNC PROGRAMMING — Credit Hours: 3 — Contact Hours: 4
Pre-Req: IET223
With assigned lab projects, the student will receive an in-depth development of programming skills for machining centers and turning centers. Skills include live-tooling, macro-programming and advanced automatic function programming. Machine, tooling, and workholding selection, coolant management, along with, cycle time reduction practices. Computer Aided Manufacturing (CAM) programming.

Automotive Technology

AUT121
AUTOMOTIVE TECH SKILLS — Credit Hours: 2 — Contact Hours: 3
This is an introductory level course that will provide the student with an understanding of the correct use of precision measuring equipment, hand tools, shop equipment, cutting torches and service repair information. Emphasized throughout the course will be shop safety procedures and the correct handling of hazardous waste materials. Applied physics fundamentals will be introduced, along with repair procedures for basic automotive components such as: fasteners, bolt hole repair, drilling and tapping, heli-coil and time-serts, fastener tensile strength and torque to yield. Classroom learning will be reinforced by lab activities.

AUT122
AUTOMOTIVE SYSTEMS AND ENG TEC 4 6
This course is designed to introduce the student to the technology and terminology of the automotive industry. The various components and systems of the automobile will be surveyed, and the basic operational theory of each will be explained. Special emphasis is placed on understanding the theory, nomenclature, and construction of the automobile engine. Subjects such as energy transformation, combustion, fuel metering, basic fuel injection, and basic emission controls will be presented. Classroom learning will be reinforced by laboratory activities.

AUT123
ENG DIAGNOSIS AND MAJ SERV 4 6
This course is designed to give the student knowledge of the procedures used for automobile engine and systems diagnosis and overhaul. During the diagnosis portion of this course, students will learn how to use diagnostic test equipment. Covered also will be customer questioning techniques and information gathering procedures. During the laboratory portion of the course, the student will gain hands-on experience in engine disassembly procedures, failure diagnosis, component inspection, machining processes, measuring, fitting, and reassembly techniques.

AUT124
VEHICLE CHASSIS SYSTEMS 4 6
This course is designed to give the student an in-depth knowledge of today's automotive steering, suspension and braking systems. Operational theory will be reinforced by laboratory periods which will allow the student to gain hands-on experience in diagnosing malfunctions, performing routine maintenance, and in making adjustments and repairs to these systems. Subjects such as vehicle four wheel alignment and base braking systems servicing will be covered. Quality work methods used when diagnosing, adjusting and repairing these safety-related systems are stressed.

AUT125
AUTOMOTIVE ELECTRICAL AND ACCES SYSTEMS 4 6
This course is designed to give the student an understanding of DC electrical principles including Ohm's Law, basic circuits, semiconductors, automotive wiring and common electrical components. Emphasis will be placed on the maintenance, diagnosis and repair of basic automotive electrical systems including starting and charging systems, electrical motors, switches and relays. Laboratory periods will allow the student to develop proficiency in the use of wiring diagrams, diagnostic flow charts and hands-on techniques utilizing DVOM's and other electrical test instruments.

AUT126
AUTOMOTIVE HVAC SYSTEMS 2 3
This course is designed to give students a sound knowledge of the theory and repair of modern automotive heating and air conditioning systems (HVAC). Before taking this course, the student should have a basic knowledge of automotive fundamentals and electrical equipment, and experience with common shop tools and techniques. Topics include: heat transfer, heating and cooling cycles, air flow management and component identification. System diagnosis, servicing, and repair techniques are demonstrated by the instructor, and lab sessions will enable the students to apply these concepts and procedures to vehicles fitted with the various manufacturers' systems. Laboratory exercises will include recovery and recycling operations required for R-12 and R134a. Special emphasis is placed on the safety aspects related to heating and air conditioning service.

AUT141
VEHICLE CHASSIS SYSTEMS 2 2
This course is designed for Toyota dealership technicians and students that desire to become Toyota dealership technicians. This course is designed to provide the student with a working knowledge of the theory and repair of Toyota steering, suspension, and braking systems. Before taking this course, the student should have a basic knowledge of automotive safety practices and experience with common shop tools and techniques. The instructor will demonstrate Toyota steering, suspension, and braking system inspection and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to Toyota vehicles. Special emphasis is placed on the health and safety aspects related to automotive brake service. Students enrolled in this course will complete four hours of out-of-class assignments and answer review questions.

AUT142
AUTOMOTIVE ELECTRICAL SYSTEMS TOYOTA 2 2
This course is designed for Toyota dealership technicians and students that desire to become Toyota dealership technicians. The course is designed to provide the student with an understanding of electrical terms, circuit concepts, and diagnostic techniques through the use of classroom instruction and hands-on training. Digital multi-meter usage is stressed. Instruction is given in wiring repair, batteries, starting, and charging systems. This course will emphasize: basic automotive circuit operation, circuit diagnosis, electrical circuit diagnosis, soldering techniques, wire and connector repair, Ohm's Law, circuit value conversions, wiring schematic interpretation, introduction to semi-conductors, and vehicle body circuits.

AUT143
AUTOMOTIVE HVAC SYSTEMS TOYOTA 750 1 1
This course is designed for Toyota dealership technicians and students that desire to become Toyota dealership technicians. This course is designed to provide the student with a sound knowledge of the theory and repair of Toyota heating and air conditioning systems. Before taking this course, the student should have a basic knowledge of automotive and electrical equipment, and experience with common shop tools and techniques. The instructor will demonstrate Toyota HVAC system diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to Toyota vehicles. Special emphasis is placed on the safety aspects related to heating and air conditioning service. The student will complete two hours of out-of-class assignments and answer review questions.

AUT144
ELECTRICAL/ELECTRONIC TERMINALS AND CONNECTORS 1 1
This course allows students to practice and demonstrate previously obtained skills prior to any performance based assessment. This course focuses on skills necessary to work with electrical and electronic systems, sub-systems and components on GM vehicles. The secondary focus of this course is the knowledge and skills required to identify, diagnose and repair electrical terminals and connectors associated with GM vehicles.

AUT145
ADVANCED HVAC SYSTEMS DIAGNOSIS 1 1
This course covers an introduction to air conditioning systems and advanced HVAC systems diagnostics. The first portion of the course concentrates on R12 and R134A refrigeration systems, recovery and evacuation procedures, charging, and leak testing. Specific topics include CCOT, VDOT, and TXV systems. The second portion of the course focuses on A/C system diagnostics, with additional emphasis placed on electrical and control systems. Specific topics include automatic A/C, dual zone A/C, and rear air systems.

AUT146
ELECTRONIC SUSPENSION SYSTEMS 1 1
This course covers operation and diagnosis of various chassis systems, such as electronic steering systems, tire pressure monitoring systems, ride height control systems, suspension control systems, and vehicle handling control systems. Class II communications as they relate to the above systems are also covered.

	Credit Hours	Contact Hours

AUT147
FOUNDATION BRAKES/ABS SYSTEMS SERVICE 1 1
This course provides system operation and diagnostic information on various base and antilock brake systems, and their related components. Topics also include master cylinder operation, quick take-up valve operation, brake/drum operation, and hydraulic systems fundamentals.

AUT148
ENGINE MECH DIAGNOSIS AND MEASUREMENT 2 2
This course covers the proper techniques and fundamental knowledge necessary to correctly isolate and diagnose abnormal engine conditions. Topics include: recommended diagnostic, measurement, and overhaul/repair procedures for GM engines.

AUT171
INTRODUCTION TO HONDA PACT 1 1
This course introduces the student to the Honda PACT program and the different methods of instruction that will be used throughout the program. This course will familiarize the student on how to access and apply Honda service information during the repair of Honda vehicles. Prior to hands-on practice, the instructor will demonstrate how to perform a Vehicle Service Inspection and a Honda New-Car Pre-delivery Inspection.

AUT172
HONDA ENGINE MECHANICAL 2 2
This course covers Honda-specific diagnostic and repair techniques necessary to service Honda engine mechanical systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper engine mechanical inspection and repair procedures. Hands-on practice will enable the student to apply these concepts to Honda vehicles. Special emphasis is placed on the safety and cleanliness aspects related to automotive engine mechanical service. Information covered in this course should assist the student in reaching a level of understanding necessary to attempt ASE certification in this area.

AUT173
HONDA STEERING AND SUSPENSION 1 1
This course covers honda-specific diagnostic and repair techniques necessary to service Honda steering and suspension systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper steering and suspension system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the safety aspects related to automotive steering and suspension service.

AUT174
HONDA BRAKING SYSTEMS 1 1
Pre-Req: AUT121
Co-Req: AUT124
This course covers Honda-specific diagnostic and repair techniques necessary to service Honda braking systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper braking system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the health and safety aspects related to automotive brake service.

AUT175
HONDA ELECTRICAL SYSTEMS 2 2
Pre-Req: AUT121
Co-Req: AUT125
This course covers Honda-specific diagnostic and repair techniques necessary to service Honda automotive electrical systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper inspection and repair procedures related to Honda automotive electrical systems. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the safety aspects related to automotive electrical service.

	Credit Hours	Contact Hours

AUT176
HONDA HVAC SYSTEMS 1 1
Pre-Req: AUT121
Co-Req: AUT125
This course covers Honda-specific diagnostic and repair techniques necessary to service Honda automotive HVAC systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper HVAC system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the environmental and safety aspects related to automotive HVAC service.

AUT181
INTRODUCTION TO CAT LIFT TRUCKS 1 1
Pre-Req: AUT121
The purpose of this course is to provide the student with an understanding of the skills and procedures needed to accurately diagnose and repair CAT lift trucks. This course introduces the student to the Caterpillar Lift Truck (CLT) Program and the different methods of instruction that will be used throughout the program. The course text is divided into small modular sections making it easy for the student to absorb and apply the information in a logic manner. This course will introduce students to the basics of fork lift trucks, their operation and an overview of the fork lift industry. Students will receive an introduction to CAT Lift Trucks, its history and the formation of the joint venture with MCFA. Each section ends with a student self-assessment worksheet covering the main topics in that section. The self-assessment worksheets contain theory-based questions and hands-on practice.

AUT182
CAT OPERATOR SAFETY TRAINING 1 1
Pre-Req: AUT121
This course will prepare the student for proper forklift truck operation in the workplace. On March 1, 1999, the Occupational Safety and Health Administration (OSHA) revised its previous requirements for powered industrial truck operator training and issued new requirements to improve the training of persons operating powered industrial trucks (forklift trucks). These provisions mandate a training program that bases training on the types of powered industrial trucks the operator will operate in the workplace; the hazards present in the workplace; and the operator's demonstrated ability to operate a powered industrial truck safely.

AUT183
CAT SERVICE INFORMATION SYSTEM 1 1
Pre-Req: AUT121
This course introduces the student to CAT service materials and planned maintenance schedules for fleets using CAT lift trucks. The instructor will demonstrate how to locate CAT technical and parts information. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. Professional image and customer relations will be stressed and how it relates to customer satisfaction. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT184
CAT HYDRAULIC SYSTEMS 1 1
Pre-Req: AUT121
The purpose of this course is to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair hydraulic systems used on lift trucks. It covers basic and advanced theories and how these theories apply to lift truck hydraulic systems. The student will be able to identify components and explain their operation. The course also includes a brief description of industry standard symbols. The course will also cover safety-related tasks before attempting to service the hydraulic system. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

	Credit Hours	Contact Hours

AUT185
CAT INTERNAL COMBUSTION ENGINE 2 2
Pre-Req: AUT121
The purpose of this course is to allow the students to build the skills necessary to accurately diagnose and repair CAT lift truck internal combustion engines. The course covers component descriptions, fuel systems used, how 4-cycle engines work, compression ratios, air filters and PCV valves and basic trouble-shooting guidelines. Fuel, ignition, and cooling system service and operation are also covered. Major emphasis is placed on in-unit service and repair of CAT (IC) engine systems. The instructor will demonstrate CAT (IC) engine diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT186
CAT MASTS AND LIFT MECHANISMS 1 1
Pre-Req: AUT121
The purpose of this course is to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair masts used on lift trucks. It covers the purpose of the mast as it relates to powered industrial trucks. The student will be able to identify components and explain their function and operation. The course includes basic steps to visually inspect the mast and diagnose and correct problems with the mast assembly. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

AUT187
CAT ELECTRICAL SYSTEMS 3 3
Pre-Req: AUT121
The course is designed to provide the student with an understanding of electrical terms, circuits concepts, and diagnostic techniques on CAT lift trucks. Digital multi-meter usage is stressed, with the students urged to bring their own meter. Instruction is given in wiring repair with time allotted for supervised practice. Also, batteries, starting, charging systems, ignition systems, lighting, and safety systems are covered in depth to insure accurate diagnosis and repair of those systems. The course will emphasize: circuit operation, circuit diagnosis, proper equipment usage for electrical circuit diagnosis, proper soldering techniques, wire and connector repair, Ohm's Law, circuit value conversions, and wiring schematic interpretation. The instructor will demonstrate CAT electrical system diagnosis and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks.

AUT188
CAT STEERING SYSTEMS 1 1
Pre-Req: AUT121
This course is designed to provide the student with a working knowledge of the theory and repair of CAT lift truck steering systems. Descriptions of drag line and hydrostatic steering systems are included with emphasis on hydrostatic. Before taking this course, the student should have basic knowledge of automotive/lift truck safety practices and experience with common shop tools and techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

AUT189
CAT BRAKING SYSTEMS 1 1
Pre-Req: AUT121
This course is designed to provide the student with a working knowledge of the theory and repair of CAT lift truck braking systems. Before taking this course, the student should have a basic knowledge of automotive/lift truck safety practices and experience with common shop tools and techniques. The instructor will demonstrate CAT braking system inspection and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

	Credit Hours	Contact Hours

AUT221
FUEL AND EMISSIONS MANAGEMENT SYSTEMS 3 4
Pre-Req: AUT121
The operation, diagnosis and servicing of fuel management and emission control systems is covered by lecture and demonstration. Emphasis is placed on the identification and servicing of specific manufacturers' systems using specialized test equipment, 4- and 5-gas analyzers will be used to reinforce student learning. Laboratory activities include diagnosis and repair of throttle body, port fuel injection systems, and emission control devices such as those utilized with EGR, AIR, and EVAP systems.

AUT222
ENGINE SYSTEM PERFORMANCE DIAGNOSIS 3 4
Pre-Req: AUT121
This course presents the techniques used for correct analysis of engine performance and driveability problems. Emphasis is placed on interpretation of manufacturers' product service information and technical service bulletins. Laboratory assignments utilizing automotive diagnostic equipment will reinforce student learning.

AUT223
ADVANCED AUTOMOTIVE ELECTRONICS 3 4
This course provides the student with the knowledge and skills required to diagnose, service, and repair body electrical systems. Students will learn how to diagnose problems and will develop skills utilizing proper diagnosis procedures. Skills developed in this course, electric and electronics systems A6, will correlate to the ASE task list. This course is an in-depth lab study of electrical/electronics, electronic information retrieval, circuit protection devices, wiring, circuit operation and diagnosis procedures of controls including, but not limited to, single and multiple contact switches, relays, transistors and computers, will promote equipment usage and personal safety for the more sensitive and complex components presented in AUT227.

AUT224
AUTOMOTIVE DIESEL SYSTEMS 2 3
Pre-Req: AUT121
Covered by lecture and practical demonstration is the theory of operation of automotive diesel engines and auxiliary equipment such as fuel injection pumps, filtration systems, glow plugs and controllers, and diesel emission control systems. The emphasis in this course is placed on the operation and servicing of fuel delivery equipment as fitted to many domestic automotive diesels. Reference will be made to other types of fuel systems where relevant to the course material. Student learning is reinforced by laboratory exercises emphasizing the correct application of diagnostic procedures and servicing methods.

AUT225
AUTOMOTIVE DRIVETRAIN I 3 4
This course precedes, but is taught in conjunction with, Automotive Drivetrain II. The purpose of this course is to give the student a sound knowledge of the operation of vehicle transmission and drivetrain systems. The course is divided into three sections: (1) clutches and flywheels; (2) manual transmissions; and (3) final drive assemblies. Included in the course is student laboratory experience in the (a) identification and diagnosis; (b) dismantling and repair; and (c) reassembly and adjustment of all components used in modern manual transmission systems.

AUT226
AUTOMOTIVE DRIVETRAIN II 3 4
This course is taught in conjunction with Automotive Drivetrain I (AUT-225). The purpose of this course is to give the student a sound knowledge of the operation, diagnosis, and repair of automatic transmission and driveline systems. Included in the course is student laboratory experience in the techniques of diagnosis, disassembly and repair, reassembly and adjustment of all components used in modern automatic transmissions.

	Credit Hours	Contact Hours

AUT227
COMPUTERIZED VEHICLE CONTROL **3** **4**
Pre-Req: AUT121
The purpose of this course is to give the student instruction on the operations of an automotive computerized system. Lab activities will include problem solving skills with diagnosis in servicing of computerized fuel, ignition, and emission control management systems. Testing of these systems will be accomplished with the use of specialized diagnostic testing equipment such as DVOM's, scanners, and voltage tracing scopes. This course will use the past knowledge that the student learned in the previous electrical and engine classes.

AUT228
AUTOMOTIVE SERVICE MANAGEMENT **2** **3**
The purpose of this course is to make the student aware of the Service Manager's/Service Advisor's role and what is entailed in doing the job in a professional manner. This course provides an introduction to the theory and practice of an important mid-management position in the automotive service field. Topics will include: customer-employee relations; scheduling and dispatching; legal and ethical responsibilities; consumer affairs and financial aspects; and quality assurance programs. The course will help the student gain experience in using customer contact skills, etc. by providing real-world experience in a service department through the field service component.

AUT229
AUTOMOTIVE MAINTENANCE WELDING **2** **4**
Pre-Req: AUT121
This course will study the identification and basic composition of metals commonly found in automotive applications. The selection of the correct equipment, rod materials and processes used in gas and electric welding will be presented by lecture and demonstration and reinforced by laboratory assignments.

AUT230
TECHNICAL PROJECT **2** **3**
This is an independent study course in which the student will create an automotive-oriented project that utilizes skills learned in previous Automotive Technology courses. The student will select an approved subject which may include functions such as research, construction and testing. Progress and performance will be evaluated throughout the semester.

AUT231
SPECIALIZED ELECTRICAL TRAINING **3** **4**
Pre-Req: AUT125
This is an elective course for automotive students that covers the fundamental laws of electricity, electrical schematic reading, wire repair, digital multimeter operation, service manual usage and electrical diagnosis of GM vehicles. Students participate in hands-on activities dealing with the vehicle electrical systems including: power windows, power door locks, wipers, HVAC, chime module, charging and starting, audio and ECM/PCM. This course emphasizes GM's strategy based diagnosis of electrical systems.

AUT232
FUEL INJECTION-EFI/PFI **2** **2**
Pre-Req: AUT223, AUT227
EFI/PFI is an automotive elective course that discusses the various types of the throttle body and multiport fuel injection systems used with GM passenger cars and light trucks. Detailed descriptions of components and the operation of the fuel management systems are given by lecture and practical demonstration. The interrelationship of fuel system/emission controls devices operation and vehicle driveability problems is also covered. Special emphasis is placed on the correct application of diagnostic flowchart information. Student learning is reinforced by participation in laboratory exercises utilizing Scantools and other specialized diagnostic equipment.

	Credit Hours	Contact Hours

AUT233
AUTOMOTIVE DIAGNOSTIC APPLICATIONS **2** **3**
Auto diagnostic applications is an advanced-level course that serves as a capstone for the Automotive Technology program. It is a final assessment of student knowledge and technical skills. Students integrate previously learned principles and concepts with practical field experiences and use specialized diagnostic equipment such as computer scan tools and lab oscilloscopes to evaluate the performance of vehicle systems and components. Under the guidance of an instructor and through an independent study component, students' diagnostic and hands-on skills are further developed and measured while performing component replacement and adjustment procedures to vehicles in a service department setting. The practical application of quality assurance techniques to automotive service work is strongly emphasized. This course also supports and reinforces knowledge required to pass the ASE Automotive Technician Certification examinations.

AUT241
BODY CONTROL SYSTEMS **2** **2**
This course reviews the advanced concepts and applications of multiple body controllers with multiple inputs and outputs. Communication languages, multiplexing, and complex networks in automotive applications are also presented.

AUT242
ENTERTAINMENT SYSTEMS **2** **2**
This course covers methods of operation and procedures for diagnosis of both GM audio systems and video entertainment systems. Systems entered include antennas, lead-in cables, integral receivers, remote components including receivers, control heads, tape players, CD and video players, and steering wheel controls (SWC). Diagnosis and correction of audio systems, noise conditions, and video system malfunction are also covered.

AUT243
GM AIR BAG SYSTEMS **1** **1**
This course focuses on front, side, and rear air bag systems. Students will gain skills and information to identify the different air bag systems and components, disarm and safely handle system components. Diagnostic tests will be performed, utilizing the Tech 2 scan tool, and digital multimeter. The course also includes content on the safe disposal and shipping of inflator modules.

AUT244
ALLISON LCT 1000 AUTOMOTIVE TRANS DI **2** **2**
This course allows the students to develop the knowledge and skills needed to properly diagnose the Allison LCT 1000 Transmission conditions related to the TCM and PCM. Emphasis will be placed on recognizing normal operating parameters. Students will also perform mechanical disassembly and reassembly procedures as well as critical measurements for in-depth understanding of the ALLISON LCT 1000 Transmission.

AUT245
VIBRATION CORRECTION **1** **1**
This course covers the theory of vibration, basic to advanced vibration diagnosis, and correction techniques. Specific topics include, usage of the electronic vibration analyzer (EVA), dial indicator, wheel balancer, and other current tools.

AUT246
REAR AXLE AND PROPELLER SHAFT **2** **2**
This course provides students with the fundamentals of rear axle and propeller shaft operation. Topics include propeller shafts and limited-slip differentials, also included are proper maintenance, service procedures, basic vibration, and noise diagnosis.

Credit Hours | Contact Hours

AUT247
VEHICLE EMISSION, ENHANCED TESTING AND DIAGNOSTICS **1** **1**
This course is designed to prepare the student for the enhanced inspection/maintenance (I/M) Programs. The course includes information about the enhanced I/M Programs, government regulations and emissions, emission control systems, and exhaust gas analysis. Hands-on exercises include interpreting I/M test reports, using a 5-gas engine analyzer, use of new and existing tools needed for testing oxygen sensors, catalytic converters, fuel and evaporation systems, and other emissions control components.

AUT248
GM POWERTRAIN PERFORMANCE **2** **2**
This course focuses on engine control subsystems and proper diagnosis of performance related conditions. Specific topics include: driveability, diagnosis, fuel injection systems, ignition systems, emission controls, PCM functions, and Tech 2 scan tools usage.

AUT249
DIESEL ENGINE PERFORMANCE **2** **2**
This course focuses on the Duramax 6.6L diesel engine operation and performance, major subsystem integration, and proper diagnosis of diesel engine conditions. Specific systems covered are the fuel systems and electronic engine controls.

AUT250
AUTOMOTIVE TRANSMISSION/TRANSAXLE DIAGNOSTICS **2** **2**
This course will help the student to develop the knowledge and skills needed to properly diagnose transmission faults related to electrical inputs to the PCM and their effects on transmission operation. Specifics covered in this course include: strategy based diagnostics, TCC operation, shift quality, and OBD II System diagnostic information.

AUT251
AUTOMOTIVE DRIVETRAINS I **1** **1**
This course is designed for Toyota dealership technicians and students that desire to become Toyota dealership technicians. The purpose of this course is to give the student a sound knowledge of the operation of Toyota manual transmission and driveline systems. The course is divided into four sections: (1) clutches and flywheels; (2) manual transmissions; (3) final drive assemblies; and; (4) transfer cases. The student will study the theory of operation of components in these four sections. Included in the course is student laboratory experience in the (a) identification and diagnosis; (b) dismantling and repair; and (c) reassembly and adjustment of all components used in modern manual transmission systems. The instructor will demonstrate Toyota manual transmission diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to Toyota vehicles. The student will be required to complete two hours of out-of-class assignments and answer review questions.

AUT252
AUTOMOTIVE DRIVETRAINS II **1** **1**
This course is designed for Toyota dealership technicians and students that desire to become Toyota dealership technicians. The purpose of this course is to familiarize the student in the operation of Toyota automatic transmission systems. The course text is divided into small modular sections making it easy for the student to absorb and apply the information in a logical manner. The instructor will demonstrate Toyota automatic transmission diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to Toyota vehicles. The student will be required to complete two hours of out-of-class assignments and answer review questions.

Credit Hours | Contact Hours

AUT253
COMPUTERIZED VEHICLE CONTROLS **2** **2**
This course is designed for Toyota dealership technicians and students that desire to become Toyota dealership technicians. The purpose of this course is to provide the student with an understanding of the skills and procedures needed to accurately diagnose and repair Toyota computerized engine control systems. The course text is divided into small modular sections making it easy for the student to absorb and apply the information in a logical manner. Each section ends with a student self-assessment worksheet covering the main topics in that section. The self-assessment worksheets contain theory-based questions and hands-on practice. A skill pretest is imbedded into the first worksheet. This is done to prepare the student for the course and demonstrate to the instructor the skill level of the student. The student will be required to complete four hours of out-of-class assignments and answer review questions. There will be two performance tests and a written final test.

AUT271
HONDA FUEL AND EMISSION SYSTEM **1** **1**
Pre-Req: AUT121, AUT221
This course covers Honda-specific diagnosis, theory and repair techniques necessary to service Honda fuel and emission systems. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper fuel and emission system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the environmental concerns and engine performance aspects that are related to automotive emission system service.

AUT273
HONDA ADVANCED DIAGNOSTIC APPLICATIONS **1** **1**
Pre-Req: AUT121, AUT233
This course covers Honda-specific diagnostic and repair techniques necessary to service air bag systems (SRS) and anti-lock braking systems (ABS) on Honda vehicles. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper system inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles. Special emphasis is placed on the safety aspects related to air bag systems (SRS) and anti-lock braking systems (ABS).

AUT275
HONDA MANUAL TRANSMISSIONS **1** **1**
Pre-Req: AUT121, AUT225
This course covers Honda-specific diagnostic and repair techniques necessary to service Honda manual transmissions. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper manual transmission inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles.

AUT276
HONDA AUTOMATIC TRANSMISSIONS **1** **1**
Pre-Req: AUT121, AUT226
This course covers Honda-specific diagnostic and repair techniques necessary to service Honda automatic transmissions. Prior to hands-on practice, the instructor will demonstrate equipment usage, Honda service materials, proper automatic transmission inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles.

AUT277
HONDA COMPUTERIZED ENGINE **2** **2**
This course covers Honda-specific diagnostic and repair techniques necessary to service Honda computerized engine control systems. Prior to hands-one practice, the instructor will demonstrate equipment usage, Honda service materials, proper computerized engine control systems inspection and repair procedures. Hands-on practice will enable the students to apply these concepts to Honda vehicles.

	Credit Hours	Contact Hours

AUT281
CAT DIFFERENTIALS AND FRONT AXLES 1 1
Pre-Req: AUT121
The purpose of this course is to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair drive axles and differentials used on lift trucks. The course covers component identification, precision measurements of components, proper setup and adjustment, and functions of these components. The instructor will demonstrate CAT differential and axle diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

AUT282
CAT TRANSMISSIONS 2 2
Pre-Req: AUT121
The purpose of this course is to teach students about the purpose and operation of transmissions used in lift trucks, specifically powershift and hydrostatic. The course covers component identification, power flow, precision measurements of components, and functions of these components. The instructor will demonstrate CAT transmission diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and self-assessment worksheet to reinforce learning objectives.

AUT283
CAT FUEL SYSTEMS (LP, GASOLINE) 2 2
Pre-Req: AUT121
This course is designed to provide the student with an understanding of the skills and procedures necessary to accurately diagnose and repair gasoline and LP fuel systems used on CAT lift trucks. Included in this course are K21-K-25, GM4.3L, and TB45 fuel systems. On-unit diagnosis of mechanical and electronic fuel control systems will include the use of traditional fuel diagnostic equipment and CAT-fuel system specialty tools. The importance of safety and proper handling of LP and gasoline fuel system components will be stressed in every segment of this class. The instructor will demonstrate CAT LP and gasoline system diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to CAT lift trucks. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT321
AC DELCO HVAC SYSTEM DIAGNOSTIC 1 1
Pre-Req: AUT121
This course builds on what is learned in the Web courses, specifically Intro to Air and HVAC Systems Operations. Intended for experienced automotive A/C service technicians, the course focuses on A/C system diagnostics, with additional emphasis placed on the electrical and control systems. Specific topics include Automatic A/C, Dual-Zone A/C and rear air systems. Hands-on practice will enable the students to apply these concepts and procedures. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT322
AC DELCO DURAMAXX 6600 DIESEL 1 2
This course is intended for experienced engine/driveability service technicians and focuses on the Duramax 6.6L diesel engine operation, performance and major sub-system integration. Specific systems covered are the fuel system and electronic engine controls. This course builds on what is learned in the Web courses. The instructor will demonstrate Duramax 6600 engine/fuel system diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures. The course concludes with a self-assessment worksheet to reinforce learning objectives.

	Credit Hours	Contact Hours

AUT323
AC DELCO BRAKING SYSTEMS 1 2
This course builds on what was learned in the Web courses and will focus on ABS, Traction Control, and Stability systems used in today's vehicles. Theory and operation, component overview, component location, and diagnostic information will also be covered. The instructor will demonstrate proper inspection and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to vehicle stability control systems. The course concludes with a description of routine maintenance procedures, troubleshooting guidelines, and a self-assessment worksheet to reinforce learning objectives.

AUT324
AC DELCO GM OBD-II DIAGNOSTIC 1 2
This hands-on course builds on what the student has learned and practiced while taking the Web courses (CBT) related to GM OBD-2 computer control systems. This course is intended for experienced ACDelco TSS technicians and concentrates on vehicle ECM/PCM diagnostics. The instructor will demonstrate GM-OBD-2 related diagnosis, servicing, and repair techniques. An in-depth overview of OBD-2 operating parameters, emission systems monitors, and self-diagnostics will accompany hands-on practice. On-vehicle testing will enable the students to apply these concepts and procedures to current vehicles. The course will conclude with a self-assessment worksheet to reinforce learning objectives.

AUT325
AC DELCO CHRYSLER OBD-II EEC DIA 1 2
This hands-on course builds on what the student has learned and practiced while taking the Web courses (CBT) related to Chrysler OBD-2 computer control systems. This course is intended for experienced ACDelco TSS technicians and concentrates on vehicle ECM/PCM diagnostics. The instructor will demonstrate Chrysler OBD-2 related diagnosis, servicing and repair techniques. An in-depth overview of OBD-2 operating parameters, emission systems monitors, and self-diagnostics will accompany hands-on practice. On-vehicle testing will enable the students to apply these concepts and procedures to current vehicles. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT326
AC DELCO FORD-OBD-II EEC DIAGNOSIS 1 2
This hands-on course builds on what the student has learned and practiced while taking the Web courses (CBT) related to Ford OBD-2 computer control systems. This course is intended for experienced ACDelco TSS technicians and concentrates on vehicle ECM/PCM diagnostics. The instructor will demonstrate Ford OBD-2 related diagnosis, servicing and repair techniques. An in-depth overview of OBD-2 operating parameters, emission systems monitors, and self-diagnostics will accompany hands-on practice. On-vehicle testing will enable the students to apply these concepts and procedures to current vehicles. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT327
AC DELCO HONDA EMISSION AND DRIVE 1 2
This hands-on course builds on what the student has learned and practiced while taking the Web courses (CBT) related to Honda OBD-2 computer control systems. This course is intended for experienced ACDelco TSS technicians and concentrates on vehicle ECM/PCM diagnostics. The instructor will demonstrate Honda OBD-2 related diagnosis, servicing, and repair techniques. An in-depth overview of OBD-2 operating parameters, emission systems monitors, and self-diagnostics will accompany hands-on practice. On-vehicle testing will enable the students to apply these concepts and procedures to current vehicles. The course concludes with a self-assessment worksheet to reinforce learning objectives.

	Credit Hours	Contact Hours

AUT328
AC DELCO ENGINE PERFORMANCE 1 2
This course focuses the diagnostic skills required to properly diagnosis engine control subsystems and performance related conditions. Specific topics include: driveability diagnosis, fuel injection systems, ignition systems, emission controls, PCM functions, and scan tool usage. This course also describes the basic purpose of OBD-II and scan tool related diagnostic procedures and tests using Strategy Based Diagnostics. The instructor will demonstrate engine diagnosis and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT329
AC DELCO BODY CONTROLS AND COMMUNICATION 1 2
This course covers the advanced concepts and applications of multiple body controllers with multiple inputs and outputs. Communication languages, multiplexing, and complex networks in automotive applications are also presented. This course also discusses how the body control module controls the operation of various features and subsystems used on most vehicles. The instructor will demonstrate diagnosis and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to vehicles with body control systems. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT330
AC DELCO GM SUPPLMNTL RESTRAINT 1 2
This hands-on course builds on what the student has learned and practiced while taking the Web courses (CBT) related to supplemental inflatable restraint systems (SIR). Intended for experienced ACDelco TSS technicians, the students will gain skill and knowledge concerning SIR components and systems. Emphasis is placed on diagnostic practices, SIR diagnostic equipment, correct service procedures, and safety concerns. The instructor will demonstrate SIR diagnosis and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to current vehicles. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT331
AC DELCO BATTERY, STARTING AND CHARGING SYSTEMS 1 2
This hands-on course builds on what the student has learned and practiced while taking the Web courses (CBT) that relates to batteries starting and charging systems. Intended for experienced ACDelco TSS technicians, the course focuses on electrical system diagnostics. The course will concentrate on automotive and light truck starting and charging system design, purpose, and operation. The instructor will demonstrate electrical system diagnosis, servicing, and repair techniques. Hands-on practice will enable the students to apply these concepts and procedures to current vehicles. The course concludes with a self-assessment worksheet to reinforce learning objectives.

AUT332
AC DELCO VIBRATION CONTROL DIAGNOSTICS 1 2
This hands-on course builds on what the student has learned and practiced while taking the Web courses (CBT), specifically the terminology and equipment used to diagnose and repair vehicle noise, vibration, and harshness (NVH) problems. Intended for experienced ACDelco TSS technicians, the course focuses on case studies involving NVH diagnostics, with specific emphasis placed on the characteristics of NVH, frequency, cycle, amplitude, order, resonance, and phasing. The instructor will demonstrate the proper use of electronic vibration analyzer (EVA) during NVH diagnosis and repair confirmation. Hands-on practice will enable the students to apply these concepts and procedures to current vehicles. The course concludes with a self-assessment worksheet to reinforce learning objectives.

	Credit Hours	Contact Hours

AUT421
GM WATERLEAK AND WINDNOISE MANAGEMENT 1 1
This course consists of a WBT and a hands-on component and is intended for body/trim service technicians. Topics include proven diagnostic procedures, test equipment and methods, and tools for adjustment and sealing operations. Upon completion of this course, technicians will be able to: identify the components used for waterleak and airflow control management, identify the steps used to diagnose customer concerns pertaining to waterleaks and wind noise, identify the appropriate repair procedures to correct waterleak and windnoise concerns, and accurately and efficiently perform diagnostic and repair procedures for waterleak and windnoise conditions.

AUT422
GM DIESEL ENGINE PERFORMANCE CERTIFICATION ASSESSMENT 1 1
This course is designed to teach the students the skills necessary to work with diesel engine performance systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing diesel engine performance systems by completing a performance based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in this course and must demonstrate proficiency of previously obtained skills.

AUT423
GM MANUAL DRIVETRAIN AND AXLE CERTIFICATION 1 1
This course is designed to teach the students the skills necessary to work with manual drivetrain and axle systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing manual drivetrain and axle systems by completing a performance based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in the course and must demonstrate proficiency of previously obtained skills.

AUT424
GM HVAC CERTIFICATION ASSESSMENT 1 1
This course is designed to teach the students the skills necessary to work with HVAC systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing HVAC systems by completing a performance-based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in this course and must demonstrate proficiency of previously obtained skills.

AUT425
GM ENGINE PERFORMANCE CERTIFICATION ASSESSMENT 1 1
This course is designed to teach the students the skills necessary to work with engine performance systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing engine performance systems by completing a performance based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in this course and must demonstrate proficiency of previously obtained skills.

AUT426
GM AUTO TRANSMISSION/TRANSAXLE 1 1
This course is designed to teach the students the skills necessary to work with automatic transmission/transaxle systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing automatic transmission/transaxle systems by completing a performance based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in this course and must demonstrate proficiency of previously obtained skills.

Credit Hours | Contact Hours

AUT427
ALTERNATIVE FUELS AND ADVANCED AUTOMOTIVE TECHNOLOGY 2 3

This course is designed to provide the student with an understanding of alternative automotive fuels and the advanced technologies associated with fuel conversion and hybrid propulsion systems. Technologies addressed in the course will include diesel, compressed natural gas (CNG), liquid petroleum gas (LPG), methanol, ethanol, E-85 (bi-fuel vehicles), hydrogen, solar, electric propulsion, hybrid propulsion, and fuel cells. The description, application, and characteristics of alternative fuels will be covered. The course presents the history, legislation, regulations, safety, and the environmental impact associated with alternative fuels and those anticipated in the near future. Vehicle design and modification as it relates to alternative fuel systems will be studied as well as the storage and distribution of alternative fuels.

AUT428
GM ENGINE REPAIR CERTIFICATION ASSESSMENT 1 1

This course is designed to teach the skills necessary to work with engine systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing engine systems by completing a performance based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in the course and must demonstrate proficiency of previously obtained skills.

AUT429
ELECTRICAL/ELECTRONIC CERTIFICATION ASSESSMENT 2 2

This course is designed to teach the students the skills necessary to work with electrical and electronic systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing electrical terminals and connectors by completing a performance based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in the course and must demonstrate proficiency of previously obtained skills.

AUT430
GM STEERING AND SUSPENSION CERTIFICATION ASSESSMENT 1 1

This course is designed to teach the students the skills necessary to work with steering and suspension systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing steering and suspension systems by completing a performance based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in the course and must demonstrate proficiency of previously obtained skills.

AUT431
GM BRAKES CERTIFICATION ASSESSMENT 1 1

This course is designed to teach the students the skills necessary to work with braking systems, sub-systems and components on GM vehicles. The secondary focus of this course is for the student to demonstrate their knowledge and skill in identifying, diagnosing and repairing braking systems by completing a performance-based assessment associated with GM vehicles. During this portion of the course, the students are tested on the information presented in the course and must demonstrate proficiency of previously obtained skills.

Credit Hours | Contact Hours

Business Computer Applications

BCA120
BUSINESS COMPUTER APPLICATIONS 4 4
Pre-Req: OAD100 or IDS120

Business Computer Applications is designed to present the essential concepts of the Microsoft Office Suite applicable to today's business world. Areas of concentration include Windows, Word, Excel, Access and PowerPoint. Upon completion, students should be able to demonstrate competency by interacting with the Windows operating system and to produce electronic presentations, written business documents, electronic spreadsheets, basic databases, and business graphics.

Biology

BIO101
INTRODUCTION TO ANATOMY AND PHYSIOLOGY 3 3

Provides understanding of human structure and function of all body systems. Focus will be given to beginning chemistry principles, cells and tissues. This course is for the student who has little or no background in human anatomy and physiology.

BIO121
ANATOMY AND PHYSIOLOGY I 4 5
Pre-Req: BIO101

The human body is presented as an integrative, homeostatic organism with emphasis on the underlying chemical and cellular processes necessary for proper functioning. The first course in a two-semester sequence examines the structure and function of basic histology, the integument, musculoskeletal system, and the central as well as somatic nervous system. The laboratory portion of the course includes extensive dissection of human cadavers as well as interactive computer simulations of physiological processes.

BIO122
ANATOMY AND PHYSIOLOGY II 4 5
Pre-Req: BIO121 or BIO123

Continued study of the human body focuses on the influence provided by the nervous and endocrine systems upon the cardiovascular, respiratory, renal, digestive and reproductive systems. Introductory immunology concepts are also included. The laboratory portion is similar to that presented in Anatomy and Physiology I with the addition of case study presentations which allow the student to contrast normal physiology with basic pathophysiology.

BIO123
PRINCIPLES OF HUMAN STRUCTURE AND FUNDAMENTALS 5 7
Pre-Req: BIO101 or BIO121

A one-semester accelerated anatomy and physiology course which introduces the human body at the cellular, tissue, organ and system levels of organization with the emphasis on the relationships between each level. Laboratory includes dissection of the human cadaver and preserved mammalian organs.

BIO124
PATHOPHYSIOLOGY 3 3
Pre-Req: BIO122 or BIO123

This course encompasses the etiology, pathogenesis, manifestations and basic treatment of diseases and disorders of the human body. Special attention is given to organic and infectious diseases as well as immune dysfunction and neoplasia. Case studies are utilized to gain an understanding of disease processes and treatments.

BIO125
MEDICAL TERMINOLOGY 3 3

An introduction to medical word structure, including prefixes, suffixes, roots, plurals and abbreviations. Spelling, definitions and pronunciation are stressed and reinforced by frequent examination.

Credit Hours | Contact Hours

BIO126
SCIENCE, ENERGY AND THE ENVIRONMENT 4 5
Utilizing interdisciplinary and theme-based learning, this course examines major environmental and energy problems and evaluates possible solutions to those problems. Topics include biodiversity, human population growth, water, air, and soil pollution, and hazardous and solid wastes. Emphasis is placed on cooperative learning, analytical thinking and problem-solving as students examine environmental issues. Laboratory and field experiences reinforce the basic ecological principles.

BIO127
HUMAN BIOLOGY 4 6
Human Biology presents the human as an organism as it relates to itself, to other humans, and to the environment. Lecture will present the scientific study of the human body including the aging process. Observations about the human at the chemical, cellular and systemic levels will be made in the laboratory incorporating a variety of laboratory experiences and may include the observation of human cadavers and other preserved specimens as learning tools. Practical work and group learning strategies will be used to facilitate evaluative learning in both the lecture and lab. The course will guide the student in a multidisciplinary study of the biology of human life.

BIO141
GENERAL BIOLOGY I 4 6
Explores general biological structures and processes experienced by all living things. Topics include: organization of life from sub cellular to systems homeostasis, how cells harvest energy and the fundamentals of molecular biology that drive genetic inheritance, evolution and population diversity. Supporting laboratory aligns with lecture topics and includes: quan/qual analysis of biomolecules, observing plant and animal cell structure and function, basic genetic analysis and examination of population dynamics.

BIO142
GENERAL BIOLOGY II 4 6
Pre-Req: BIO141
Continuation of BIO141. Topics include: the origins and biodiversity of life through an evolutionary survey of viruses, bacteria, plants and animals, the principles of biological classification, the identification and dynamics of a biological ecosystems, designing and reporting biological research. Supporting laboratory aligns with lectures topics and includes: examination and dissection of representative organisms to show evolutionary progression, exploration of phylogenetic concepts and analysis, visiting and evaluating local ecosystems to identify population dynamics, and the effects of pollution. Students will complete the semester by designing a group research experiment and reporting the results in an acceptable scientific format.

BIO221
PRINCIPLES OF MICROBIOLOGY 4 6
Pre-Req: BIO122 or BIO123
This course examines microbial structure and function with particular emphasis on medical microbiology. Content includes taxonomy, identification procedures, microbial growth and control, microbial genetics and the epidemiology of common infectious diseases. The laboratory experiences include staining, culturing and aseptic techniques, as well as various diagnostic procedures.

BIO222
PHARMACOLOGY 3 3
Pre-Req: BIO122 or BIO123
A course that introduces the student to general pharmacology, including drug nomenclature, classifications, and therapeutic and side effects on the body systems and functions.

Credit Hours | Contact Hours

Biotechnology

BST120
INTRODUCTION TO BIOTECHNOLOGY 1 1
This course will introduce students to the historical and technical concepts responsible for the rapidly growing biotechnology industry. Topics include the history of biotechnology applications such as pharmaceutical research and manufacturing, advancements in agricultural productivity as well as identifying the basic techniques and instrumentation used in these applications.

BST121
BASIC BIOTECHNOLOGY METHODS 1 2
Students will be exposed to and practice the various techniques used in a modern biotechnology lab. Such techniques include basic laboratory measurement and calculations (introducing micro-and nano-scale), pipetting, reagent preparation, detailed note taking, record keeping, etc. In addition, students will be taught to follow standard lab protocols to ensure good lab practices and adherence to basic governmental and safety regulations.

BST122
ADVANCED BIOTECHNOLOGY METHODS 3 5
Pre-Req: BST121
This course expands on the techniques and protocols introduced to the students in BST121. Advanced biotechnology/bioscience techniques such as gel electrophoresis, centrifugation, cellular and molecular sample preparation and handling will be added, while comprehensively reinforcing and strengthening skills in the performance of basic techniques and protocols.

BST130
BIOTECHNOLOGY SEMINAR I 1 1
A seminar course presented in a "journal-club" format. Students will read and discuss articles covering the latest techniques and trends used in the biotechnology industry. Guest speakers will be invited to present overviews of their work to the group.

BST220
MOLECULAR BIOLOGY TECHNIQUES 4 6
Pre-Req: BST122
Topics presented will cover naturally occurring molecular processes (repliation, transcription, translation, proofreading, splicing, etc.) in order to explain how they can be exploited in various ways to benefit the biotechnology industry. The laboratory portion of this course will use techniques that duplicate or manipulate these natural processes to explore the stepwise progression of isolating a gene through converting it into an important biologically active protein (includes nucleic acid and protein isolation and purification, PCR, as well as gene cloning, sequencing and expression studies).

BST221
CELL AND TISSUE CULTURE 2 4
Pre-Req: BST122
Cell and tissue culture are two of the most widely used techniques in biotechnology. In this course students will cover the techniques used for maintaining living cells in culture: aesptic technique, counting cells, subculturing, cryopreservation (freezing) and thawing. Students will obtain hands-on training in all techniques listed above. Lecture and discussion sessions will include the techniques mentioned above as well as the following topics: cell culture equipment, contamination, optimization of growth conditions, recombinant DNA transfection and the future of tissue engineering.

BST222
CELLULAR AND SUBCELLULAR SEPTN 4 6
Pre-Req: BST122
Students will learn the various strategies and techniques used to purify and characterize biomolecules, with an emphasis on protein. Purification techniques to be employed in the lab include fractionation, centrifugation and low/high-pressure chromatography followed by characterization procedures such as electrophoresis and spectrometry.

Credit Hours | Contact Hours

BST225
BIOTECHNOLOGY INSTRUMENTATION 3 5
Pre-Req: BST122
This course will introduce students to the variety of instrumentation used in a biotechnology lab. Students will master the function and use of each instrument as well as proper maintenance, calibration, documentation techniques and protocols.

BST230
BIOTECHNOLGY SEMINAR II 1 1
Pre-Req: BST130
Students will read, discuss and present articles associated with biotechnology. Students will also present the results of their individual research project as part of the requisite of this seminar course.

BST240
BIOINFORMATICS 3 5
Due to the large volume of data being generated and shared by the biotechnology community bioinformatics is an important biotechnology discipline. Utilizing computers, students will explore molecular geometric structure, sequence analysis, alignment and comparison, database mining and genome mapping.

BST250
BIOPROCESSES AND MANUFACTURING 4 6
Pre-Req: BST122
In this course students will learn the processes used for large scale biotechnology related production processes such as fermentation with a focus on regulatory and quality assurance aspects of this type of manufacturing, such as Good Lab Practices (GLP), Good Manufacturing Practices (GMP) and procedures/practices defined by the International Standards Organization (ISO).

BST271
BIOTECH INDEPENDENT STUDY 1 3
Pre-Req: BST220
Co-Req: BST230
Students will carry out an individual research project either on or off campus under guidance of an outside advisor or a faculty member. Goals of this research project will be discussed between the student and the advisor and will be agreed to before the start of the project. Results from this project will be presented in seminar form as part of the student's participation in Biotechnology Seminar II.

BST272
BIOTECHNOLOGY INDEPENDENT STUDY 2 6
Pre-Req: BST220
Co-Req: BST230
Students will carry out an individual research project either on or off campus under guidance of an outside advisor or a faculty member. and the advisor and will be agreed to before the start of the project. Results from this project will be presented in seminar form as part of the student's participation in Biotechnology Seminar II.

BST273
BIOTECHNOLOGY INDEPENDENT STUDY 3 9
Pre-Req: BST220
Co-Req: BST230
Students will carry out an individual research project either on or off campus under guidance of an outside advisor or a faculty member. Goals of this research project will be discussed between the student and the advisor and will be agreed to before the start of the project. Results from this project will be presented in seminar form as part of the student's participation in Biotechnology Seminar II.

Credit Hours | Contact Hours

BST274
BIOTECHNOLOGY INDEPENDENT STUDY 4 12
Pre-Req: BST220
Co-Req: BST230
Students will carry out an individual research project either on or off campus under guidance of an outside advisor or a faculty member. Goals of this research project will be discussed between the student and the advisor and will be agreed to before the start of the project. Results from this project will be presented in seminar form as part of the student's participation in Biotechnology Seminar II.

BST275
BIOTECHNOLOGY INDEPENDENT STUDY 5 15
Pre-Req: BST220
Co-Req: BST230
Students will carry out an individual research project either on or off campus under guidance of an outside advisor or a faculty member. Goals of this research project will be discussed between the student and the advisor and will be agreed to before the start of the project. Results from this project will be presented in seminar form as part of the student's participation in Biotechnology Seminar II.

BST276
BIOTECHNOLOGY INDEPENDENT STUDY 6 18
Pre-Req: BST220
Co-Req: BST230
Students will carry out an individual research project either on or off campus under guidance of an outside advisor or a faculty member. Goals of this research project will be discussed between the student and the advisor and will be agreed to before the start of the project. Results from this project will be presented in seminar form as part of the student's participation in Biotechnology Seminar II.

BST277
BIOTECHNOLOGY INDEPENDENT STUDY 7 21
Pre-Req: BST220
Co-Req: BST230
Students will carry out an individual research project either on or off campus under guidance of an outside advisor or a faculty member. Goals of this research project will be discussed between the student and the advisor and will be agreed to before the start of the project. Results from this project will be presented in seminar form as part of the student's participation in Biotechnology Seminar II.

Business Technology Special Courses

BTD201
BUSINESS INDEPENDENT STUDY 1 10
An independent study may be arranged through the business technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisory and dean for business technologies will determine course content, meeting schedules and credit hours.

BTD202
BUSINESS INDEPENDENT STUDY 2 20
An independent study may be arranged through the business technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisory and dean for business technologies will determine course content, meeting schedules and credit hours.

BTD203
BUSINESS INDEPENDENT STUDY 3 30
An independent study may be arranged through the business technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisory and dean for business technologies will determine course content, meeting schedules and credit hours.

	Credit Hours	Contact Hours

BTD204
BUSINESS INDEPENDENT STUDY 4 40
An independent study may be arranged through the business technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisory and dean for business technologies will determine course content, meeting schedules and credit hours.

BTD222
BUSINESS CO-OP 2 20
Co-op opportunities are available to students enrolled in business technologies. Students may contact their faculty advisors or career services for more information.

BTD223
BUSINESS CO-OP 3 30
Co-op opportunities are available to students enrolled in business technologies. Students may contact their faculty advisors or Career Services for more information.

BTD224
BUSINESS CO-OP 4 40
Co-op opportunities are available to students enrolled in business technologies. Students may contact their faculty advisors or career services for more information.

BTD225
SPECIAL TOPICS 1 1
Special topics in business technology division. Repeat registration permitted.

BTD226
SPECIAL TOPICS 2 2
Special topics in business technology division. Repeat registration permitted.

BTD227
SPECIAL TOPICS 3 3
Special topics in business technology division. Repeat registration permitted.

BTD228
SPECIAL TOPICS 4 4
Special topics in business technology division. Repeat registration permitted.

Business Technology

BUS121
BUSINESS ADMINISTRATION 4 4
Pre-Req: IDS102
A survey course designed to develop a comprehension of business theories and principles. Students will examine the following: American business development, management and organization, human resources, marketing, information for business strategy, decision making, finance and investment. Upon completion, students should be able to demonstrate an understanding of the above topic areas and have a foundation for studying other business subjects.

BUS122
BASIC ECONOMICS 3 3
Pre-Req: IDS102
A survey course designed to introduce students to basic economic concepts and principles of modern micro- and macro-economics. Major topic areas will include supply and demand, price system, market economies, monetary and fiscal policy and global economic issues. Upon completion, students should be able to demonstrate an understanding of the above topic areas.

	Credit Hours	Contact Hours

BUS123
BUSINESS MATHEMATICS 4 4
Pre-Req: MTH101 or MTH103
This course is designed to present and facilitate the mastery of many of the mathematical concepts that are necessary for a successful career in today's business environment. These concepts include equations and formulas, payroll, mathematics of buying, markup, markdown and inventory control, simple interest, business statistics, notes and bank discounts, compound interest, business and consumer loans, and ordinary annuities. Upon successful completion of this course, the student should be able to apply fundamental math concepts to business problems.

BUS221
MICROECONOMICS 3 3
Pre-Req: IDS102
An in-depth study of microeconomic concepts and principles such as supply and demand, cost and output determination in different market structures and marginal analysis. Upon completion, students should be able to demonstrate an understanding and be able to apply the above topics to business.

BUS222
MACROECONOMICS 3 3
Pre-Req: IDS102
An in-depth study of macro-economic concepts and principles such as market supply and demand, unemployment and inflation, monetary and fiscal policy, national income accounting and Classical and Keynesian models. Upon completion, students should be able to apply and demonstrate an understanding of the above topics relative to today's economy.

BUS223
INTERNATIONAL ECONOMICS 3 3
Pre-Req: BUS221, BUS222
This course covers the economic analysis of international trade and foreign investment, including theories of international trade, balance of payments, exchange rates and international monetary arrangements, adjustments of payments disequilibrium, and government policies on trade and aid. Upon completion, students should be able to demonstrate an understanding of the international economic environment.

Computer Technology

CAP139
INTRODUCTION TO ORACLE SQL 3 4
Pre-Req: ECA122
This course offers students an extensive introduction to data server technology. The class covers the concepts of both relational and object relational databases and the powerful SQL programming language. Students are taught to create and maintain database objects and to store, retrieve, and to manipulate data. Students learn to write SQL and SQL*Plus script files using the SQL*Plus tools to generate report-like output. Demonstrations and hands-on practice reinforce the fundamental concepts.

CAP141
ORACLE PL/SQL PROGRAMMING LANG 3 4
Pre-Req: CAP139
The course introduces PL/SQL and helps students understand the benefits of this powerful programming language. The student will create PL/SQL blocks of application code that can be shared by multiple forms, reports and data management applications. The student will use SQL*Plus to develop these program units, learn to manage PL/SQL program units and database triggers to manage dependencies, to manipulate large objects, handle exceptions and to use some of the Oracle-supplied package.

CAP248
ORACLE 9I FORMS AND REPORTS 3 4
Pre-Req: CAP139
The course teaches participants how to develop code for database applications. Topics include Oracle database access with Java, XML, PL/SQL, WebDB as well as Web Site Development with Oracle.

	Credit Hours	Contact Hours

CAP249
ORACLE PERFORMANCE AND TUNING **3** **4**
Pre-Req: CAP142
This intensive Oracle tuning course is designed to provide an in-depth overview of Oracle internal structure for maximum high performance. This is not your run-of-the-mill Oracle tuning course. Unlike the boilerplate Oracle tuning courses that deliver obsolete and low-impact tuning techniques, this course shows real-world techniques that can cut overall response time by more than 50%. While the course is topical in nature, the course emphasizes the central theme of database monitoring and the proper use of alert mechanisms. Upon completion students will know how to use the Oracle STATSLACM utility and how to monitor virtually every aspect of their Oracle database.

CAP250
ORACLE BACKUP AND RECOVERY **3** **4**
Pre-Req: CAP142
Students develop the ability to manage an advanced information system and learn several methods to backup and to recover the Oracle database. Hands-on workshops provide experience in a realistic technical environment and help students develop skills for basic network administration.

CAP257
MS APPLICATION TECHNICAL EXPERT **3** **4**
Pre-Req: CAP125
This course will focus on advanced Microsoft Office functionality from the perspective of the help desk technician. The topics included are macros, VGA, creating online forms, linking Excel worksheets and charting data in Word, auditing in Excel, importing external data, creating data maps, creating reports in Access, and distributing presentations to remote audiences.

Civil Engineering Technology

CET121
BUILDING MATERIALS AND CON MET **3** **4**
This course familiarizes the student with the basic materials of construction according to their physical properties, durability and suitability for use under varying conditions. Use of materials in combination with one another and in the finished product will be examined both verbally and graphically. Emphasis is placed on material selection according to given criteria.

CET122
ARCHITECTURAL DRAFT I **3** **5**
This course familiarizes the student with the preparation and comprehension of basic architectural drawings. Intended for those with little or no drafting experience, the course will concentrate on drafting techniques through the drafting of plans, elevations and selected details, in pencil on vellum.

CET123
ARCHITECTURAL DRAFT II **3** **5**
Pre-Req: CET122
This course concentrates on the preparation of building details and sections. Emphasis will be placed upon the design of details and their synthesis into a final graphic product.

CET124
HIGHWAY AND MAP DRAWING **2** **4**
Pre-Req: MTH121
Surveyors' notes are used by the student to develop and draw topographic and contour maps and plan-profile sheets for highway construction. Proper interpretation and uses of these drawings are also discussed.

CET125
SOIL MECHANICS **3** **4**
Pre-Req: MTH121
Co-Req: MET124
This course includes laboratory tests, soil classification systems, and theoretical concepts relative to soil strengths, stresses in soil masses, settlement under structures, bearing capacity for shallow foundations, retaining walls and slope stability.

	Credit Hours	Contact Hours

CET221
SURVEYING GRAPHICS **3** **4**
Pre-Req: CET227, DET125
This course will introduce the student to computerized methods of preparing the various types of maps used by surveyors, civil engineers and contractors. Students will also learn how to prepare plans from electronic data recorders. Coding techniques for field use of data recorders will also be discussed.

CET222
CONCRETE AND ASPHALT TEST **3** **4**
Pre-Req: CET121, MTH121
Major emphasis will be placed on the testing procedures used by engineers in determining material acceptance. Concrete and asphalt design methods will be covered, along with the conducting of many tests and the design of pavement.

CET223
STRUCTURAL DESIGN I **3** **4**
Pre-Req: MET124
This course introduces the student to the analysis of simple structures. Topics include the application of loads on structures, and the analysis and design of steel and concrete members such as beams, columns, and frames. Current computer software for structural analysis will also be used.

CET224
STRUCTURAL DESIGN II **3** **5**
Pre-Req: CET223
Analysis and design of wood members (beams, columns) will be covered in this class. Advanced topics in steel connections and concrete reinforcement of beams, slabs, columns, footings and retailing walls will also be studied. Current computer software for structural analysis will be used.

CET225
SITE AND BUILDING SERVICE SYSTEMS **3** **4**
Pre-Req: CET121, MTH121
This course examines hydraulics and hydrology in connection with storm water management, the design of management systems, water supply and waste for buildings, thermodynamics of buildings, HVAC design and lighting design.

CET226
ESTIMATING **3** **5**
Pre-Req: CET121, ECA122, MTH121, CET122 or DET125
This course develops the methods and procedures for preparing construction estimates, both manually and electronically. Topics include excavation, masonry, concrete, steel and carpentry. Emphasis is placed on take-off procedures and pricing, consideration of labor and equipment costs, and overhead and profit. Computer programs will be utilized to establish a construction schedule. The student will do a complete estimate of a building project and prepare a competitive bid for the job.

CET227
SURVEYING I **3** **5**
Pre-Req: MTH121
The student is given practical experience in the use of the various surveying instruments while learning how to measure distances, angles and elevations. Methods of determining error of closure, coordinates and area for a property survey are discussed, as well as construction surveys.

CET228
SURVEYING II **3** **5**
Pre-Req: CET227
Course covers methods and procedures for establishing line and grade for construction. Circular, spiral and parabolic curves, earth volume determination, cross-sectioning methods and advanced construction staking methods are also covered. The student is also introduced to electronic total stations and data collection. Use of the computer will be emphasized.

Credit Hours | Contact Hours

CET229
SURVEYING III 3 5
Pre-Req: CET228, ECA122
The primary emphasis of this course will be the use of the electronic total station to perform surveying operations. Increased abilities and accuracies of field work, including precision measurement, will be demonstrated and obtained by students in such areas as traversing, horizontal and spiral curve layout, construction staking and data gathering for topographic maps. Appropriate computer software will be used. The student will also experience increased usage of digital levels and automatic data collection along with geodetic survey methods and state plane coordinate systems.

CET231
LEGAL PRINCIPLES OF SURVEYING 3 3
The laws of land ownership, title guarantees, deed platting, interpretation of property descriptions, riparian rights and establishment of property lines will be discussed. Also covered will be the surveyor's rights, duties and liabilities; the state of Ohio survey laws; and minimum standards for boundary determination, description writing and map preparation. The historical development of the rectangular system of land subdivision will be covered, with primary emphasis placed on Ohio, as it is the site of the first public land surveys.

CET232
LAND PLANNING AND DESIGN 3 5
Pre-Req: CET122 or CET124 or DET125
Co-Req: CET227
This course covers the study of site capabilities and potentials as they relate to land planning and subdivision design. Students will complete preliminary layouts for projects such as industrial parks, housing allotments, planned unit developments and commercial home sites in accordance with zoning and subdivision regulations.

CET233
ARCHITECTURAL DESIGN 3 5
Pre-Req: CET121, CET123
The basics of design will be examined while solving architectural design problems. The student will be required to prepare preliminary design drawings that fully express the intended solution.

CET234
A/E CAD 2 4
Pre-Req: CET121, CET122, DET125
Building on the concepts learned in Basic AutoCAD, this course is designed to explore the production of architectural working drawings using software designed specifically for the architectural/engineering disciplines. Students will produce a variety of architectural working drawings on the computer-aided drafting system.

CET235
CONSTRUCT MGT, JOB COST AND SAFETY 3 3
Pre-Req: CET121, ECA122
This course examines the progression of a building project from its inception to completion along with the administration of it in the office and in the field. Contract law and the legal implications of documents will be discussed. The student will also be familiarized with specifications, shop drawings and computerized project control software.

CET236
GLOBAL POSITIONING SYSTEM 3 4
Pre-Req: CET227
Introduction to global positioning system to determine location on earth in a three dimensional way (latitude, longitude and elevation). Students will practice the use of electronic receivers using radio signals to collect data and process later using computers. The use surveying and topography mapping is also included.

Credit Hours | Contact Hours

CET237
INTERPRETING CONSTRUCTION DOC 2 3
This course focuses on interpreting the construction documents for the purposes of estimating, scheduling, and field-directing a construction project. It includes reading the designers' drawings for residential, light commercial, heavy commercial, and civil engineering projects. The specifications for the projects are studied with attention to the materials and installation requirements contained therein.

CET239
BUILDING CODE APPLICATION 2 3
Pre-Req: CET121, CET237 or CET122
Commercial building and residential building codes are studied to become familiar with the general intent of the codes in selected areas and how they relate to the construction industry. Special attention is paid to portions of the code that are typically a problem to code officials in the prosecution of their duties.

Chemistry

CHM101
INTRODUCTION TO CHEMISTRY 4 4
Pre-Req: MTH101 or MTH103
A problem-solving course to familiarize the student who has limited previous chemistry background with basic chemistry and mathematical skills. Course covers basic algebra skills, powers of ten (exponents), dimensional analysis, metric measurements and conversions, atomic theory, molecular structure, the periodic table and its uses, inorganic nomenclature, the mole concept, the gas laws and different types of solutions. The recitation portion of this class will involve pertinent problem-solving.

CHM121
GENERAL, ORGANIC AND BIOLOGICAL CHEMISTRY I 4 5
Pre-Req: CHM101
Principles of general and inorganic chemistry are presented in lecture. Topics include atomic structure, chemical bonding and compounds, energy changes, gas laws, solutions, and acids and bases. The laboratory experiences include basic scientific measurements, physical property measurements, inorganic physical and chemical change observations and laboratory reporting.

CHM122
GENERAL, ORGANIC AND BIOLOGICAL CHEMISTRY II 4 5
Pre-Req: CHM121
The course examines the structures, names, reactions and physical properties of the major groups of organic and biological compounds including alkenes, alkynes, aromatics, alcohols, ethers, aldehydes, ketones, carboxylic acids and esters and biological compounds including carbohydrate lipids, proteins and nucleic acid molecules. Basic metabolic reactions, including dehydration synthesis, hydrolytic digestion and biooxidations are described. Laboratory exercises demonstrate the properties and reactions of the compounds studied in lecture.

CHM141
GENERAL CHEMISTRY I 5 7
Pre-Req: CHM101
A broad overview of chemical principles and reactivity. Topics include atomic structure, chemical bonding and molecular structure, inorganic compounds, organic compounds, chemical periodicity, stoichiometry and nuclear chemistry.

CHM142
GENERAL CHEMISTRY II 5 7
Pre-Req: CHM141
A broad overview of chemical principles and reactivity. Topics include biochemistry, thermodynamics, chemical equilibrium, acid-based theories, solubility, electrochemistry, and chemical and biochemical kinetics.

Communications

COM121
EFFECTIVE SPEAKING — Credit Hours: 3 — Contact Hours: 3

This course is designed to help students develop effective speaking skills so that they are better prepared to speak before groups in business or industry. Principles of content selection, organization, audience analysis, and projection are studied.

COM122
COMMUNICATION THEORY — Credit Hours: 3 — Contact Hours: 3

This course examines the process of communication and general semantics. Propaganda techniques and their abuses are explored, along with logical thinking methods. Application of communication principles in a problem-solving exercise emphasizes win/win solutions.

COM123
INTERGROUP COMMUNICATIONS — Credit Hours: 3 — Contact Hours: 3
Pre-Req: ENG124

Students examine the role of the individual in small work and social group environments. Primary aspects of the course concentrate on the student conducting research in a variety of topic areas, organizing the collected data in written format, and being able to present the results of the research verbally and non-verbally to a small audience. Students relate principles of group dynamic theory to actual application in the classroom setting. Research areas include topics of primary concern to the student's technology.

COM124
TECHNICAL EDITING AND LAYOUT — Credit Hours: 3 — Contact Hours: 3
Pre-Req: ENG124, ENG224

This course will introduce students to the editing process and teach students the basic of design layout. Students will practice both hard copy and electronic editing and proofreading, as well as study and discuss a variety of editorial approaches.

COM223
CAPTURING VERBAL INFORMATION — Credit Hours: 3 — Contact Hours: 3
Pre-Req: ENG124, ENG224

This course is designed to instruct students in the art of interviewing and transposing oral information into clear and accessible written format. Students will complete study of the communicative aspects of interviewing and practice the design and compositional components involved with the creation and maintenance of manuals and brochures.

COM224
INTERNSHIP — Credit Hours: 3 — Contact Hours: 3

Students will work with private companies and public institutions during a specified period of time with a member of the English Department at Stark State College serving in an advisory capacity. This is a non-paid internship. Successful completion of the internship will require confirmation by the representative of the institution and the student's advisor that obligations and objectives have been met. Can only be completed in student's final semester at Stark State College.

Design Engineering Technology

DET121
ENGINEERING DRAWING — Credit Hours: 3 — Contact Hours: 5

This is a beginning drafting course that includes use of instruments, geometric constructions, technical lettering, orthographic projection, auxiliary views, sectional views, dimensioning and conventional practice.

DET122
DESCRIPTIVE GEOMETRY — Credit Hours: 3 — Contact Hours: 5
Pre-Req: DET121

This course is designed to enable the student to properly visualize any object, regardless of its complexity. The three basic geometric elements (points, lines and surfaces) and their relationships to each other are described in detail.

DET124
WORKING DRAWINGS — Credit Hours: 3 — Contact Hours: 5
Pre-Req: DET121
Co-Req: DET125

Course covers threads, welding, fasteners, tolerancing, fits, and basic geometric dimensioning as they relate to detail and assembly drawings. Students are required to complete a set of working drawings that are technically correct and feasible for production. Emphasis is placed on the various components that constitute a well-executed drawing.

DET125
BASIC AUTOCAD — Credit Hours: 3 — Contact Hours: 5

This course begins with basics and gives students hands-on experience using personal computers to create engineering drawings with AutoCAD software. Topics include: basic components of a CAD system, overview of [Windows] operations, input methods, drawing setup and display, editing, dimensioning, text, layers, hatching, blocks and plotting.

DET126
CUSTOMIZING AUTOCAD — Credit Hours: 3 — Contact Hours: 4
Pre-Req: DET125

Building on concepts learned in Basic AutoCAD, this course focuses on more advanced topics: isomode; attributes; creation of toolbars, pull-down and button menus; creation of custom line types and hatch patterns; and an introduction to the fundamentals of AutoLISP programming.

DET131
PRO/ENGINEER — Credit Hours: 3 — Contact Hours: 4
Pre-Req: DET121

This three-dimensional drawing uses Parametric Technology Corporation Pro/ENGINEER software and covers the basic through advanced commands. The basics focus on practical applications of design to develop parametric solid model representations of parts and assemblies. Advanced design features include the use of skeletons, advanced sketching, geometry, patterns, surface options, dimensions, bill of materials, and features, and plotting.

DET223
KINEMATICS — Credit Hours: 3 — Contact Hours: 5
Pre-Req: PHY121

This course covers motion of mechanisms. Machine displacement, velocity and accelerations are studied in detail. Using graphical, analytical and numerical approaches, various machine elements are analyzed and designed. The course relates theory learned in the first year with practical machine design applications. PC software programs and spreadsheets are used to verify design solutions.

DET226
GEOMETRIC DIM AND TOL — Credit Hours: 2 — Contact Hours: 3
Pre-Req: DET124

Designed to introduce students to the type of dimensioning that is part of ANSIY14.5M1994 dimensioning standard. General tolerancing methods will be reviewed first, then the geometric characteristics symbols and terms will be discussed. Datums will be defined and modifiers will be identified. The geometric tolerances of form, runout, orientation, profile and location will be analyzed in detail. The GD&T system will then be applied to actual manufacturing drawings. Special attention will be given to the problems that are experienced in industry between design, manufacturing and inspection personnel.

DET230
ADVANCED AUTOCAD (INVENTOR) — Credit Hours: 3 — Contact Hours: 4
Pre-Req: DET125

An introduction to solid modeling using Autodesk's Inventor and the tools and commands to complete fully paramedtric three-dimensional parts, assemblies, presentations, and two-dimensional drawings. The student must have an understanding of computer-aided and mechanical drafting.

Credit Hours | Contact Hours

DET231
TOOL DESIGN 3 5
Pre-Req: DET124, DET125
This course covers the design and drawing of production jigs, fixtures, and stamping dies. The emphasis in jig and fixtures is placed on coordination of machine tools and standard component parts, using symbol libraries and AutoCAD to draw the final layout. While in stamping dies, a step-by-step approach is emphasized in drawing the details and assembly of a die including material punches, die sets, strippers, gauges, pilots and presses.

Dental Hygiene

DHY121
HEAD, NECK AND ORAL ANATOMY 2 3
The course addresses gross anatomy of the head and neck, tooth morpholgy and physiology of occlusion.

DHY122
ORAL HISTORY AND EMBRYOLOGY 1 1
Embryological development and histologic characteristics of the orofacial organs and structures is presented.

DHY123
DENTAL RADIOGRAPHY 3 5
Pre-Req: DHY121
This course is designed to introduce the student to fundamental knowledge of radiographic principles and safety considerations. Skill development in image production, mounting techniques and radiographic interpretation is emphasized.

DHY124
PERIODONTICS I 1 1
Pre-Req: DHY122
Explores etiology, diagnosis and prevention of diseases affecting tissues that support, attach and surround the teeth. Observation field experience is required.

DHY125
DENTAL MATERIALS 3 5
Pre-Req: DHY131
Course design covers fundamental knowledge of the dental materials commonly used in contemporary dental practice including their physical, chemical and manipulative characteristics. Skill development in correctly using these materials is emphasized.

DHY126
PATHOLOGY 2 3
Pre-Req: DHY122
Concepts of developmental/growth disturbances; diseases of microbiological origin; injury and repair; metabolic and disease disturbances; and oral manifestations of diseases and conditions is presented.

DHY127
COMMUNITY ORAL HEALTH-RESEARCH 1 1
Concepts of research design, methods and evaluation as it relates to community health program planning are presented. Course content emphasizes reading and reviewing scientific literature, understanding assessment processes and statistical reporting and the levels of public health prevention and administration.

DHY128
INTRODUCTION TO DENTAL TERMINOLOGY AND ANATOMY 2 2
This course will introduce basic concepts in dental terminology and neck anatomy necessary for preparation for beginning technical study in expanded functions of dental auxillary procedures. This course is useful for students who are not currently employees in a dental setting, who have not completed a post secondary dental assisting program or at least one year of an accredited dental hygiene curriculum.

Credit Hours | Contact Hours

DHY131
FUND DENTAL HYGIENE PRAC 4 8
An introduction to dentistry, the dental hygiene profession, and ethical and professional patient care, terminology and basic skills utilized in the contemporary practice of dental hygiene, including infection control procedures and patient assessment and treatment are covered. Concepts are applied in a preclinical setting with manikins and student partners.

DHY132
DENTAL HYGIENE THEORY I 2 2
Pre-Req: DHY131
Co-Reg: DHY133
Builds upon fundamentals to provide further study of dental hygiene practices including, but not limited to, dental specialties, treatment planning and management of medical/dental emergencies.

DHY133
CLINICAL DENTAL HYGIENE I 2 6
Pre-Req: DHY131, DHY123
Co-Req: DHY132
Supervised clinical patient care experiences which reinforce fundamentals, correlate with, and allow the application of, dental procedures and concepts presented in Dental Hygiene Theory I. Emphasis on application of basic skills and professionalism.

DHY134
CLINICAL DENTAL HYGIENE IA 1 3
Pre-Req: DHY133
Supervised clinical patient care experiences which allow further development of clinical skills and application of concepts. Emphasis on patient management and effective communications.

DHY221
NUTRITION IN DENTISTRY 1 1
Pre-Req: DHY132
Basic concepts of nutrition and the effects on general as well as oral health are presented. The role of nutrition in dentistry for disease prevention and health promotion is emphasized.

DHY222
DENTAL PHARMACOLOGY 2 2
Pre-Req: BIO221, DHY126
General principles of drug regulation and prescribing, action and handling and adverse reactions is covered. Body systems, medical histories and their impact on drugs used in dentistry and their potential to alter dental treatment is discussed. Drugs used to manage medical emergencies and control pain and anxiety is emphasized.

DHY223
COMMUNITY ORAL HEALTH II 1 2
Pre-Req: DHY127, DHY134
Concepts of assessing, planning, implementing and evaluating oral health programs for community groups is presented. This course focuses on program planning models, incorporation of research methods into programs development and evaluation and offers practical application of community health concepts. Field experience required.

DHY224
PERIODONTICS II 1 1
Pre-Req: DHY124
This course builds upon and reinforces fundamentals of periodontics with clinical case applications. Periodontal evaluation and surgical and chemotherapeutic treatment modalities are discussed and experienced through a required field observation. Current advances in periodontic research and therapy is presented.

Credit Hours | Contact Hours

DHY225
ANESTHESIA AND PAIN CONTROL **2** **4**
Pre-Req: BIO122, DHY121, DHY132
This course will teach the basic concepts of anesthesia and pain control as they relate to patient management in the provision of comprehensive dental hygiene care. Lecture will focus on theory of pain control, selection of pain control modalities and implications of local anesthesia. Topics will utilize knowledge and review of anatomy, physiology and pharmacology. Lab includes competency based practice of the administration of pain control modalities.

DHY231
DENTAL HYGIENE THEORY II **2** **2**
Pre-Req: DHY132
Co-Req: DHY232
Designed to further explore treatment modalities and dental hygiene services such as dietary analysis and counseling, oral hygiene indices, and tobacco use and cessation education and supplemental care procedures, this course focuses on the development of more dental hygiene treatment plans and working with patients with special needs.

DHY232
CLINICAL DENTAL HYGIENE II **4** **12**
Pre-Req: DHY134
Supervised patient care experiences which refine fundamentals, correlate with, and allow application of, dental hygiene procedures and lecture concepts presented in Dental Hygiene Theory II. Emphasis on total patient car and treatment planning, including judgment and decision-making.

DHY233
DENTAL HYGIENE THEORY III **2** **2**
Pre-Req: DHY231
Co-Req: DHY234
Further exploration of treatment modalities and adjunct procedures is covered. The course focuses on transitions to practice, including principles of office management, jurisprudence, ethics and current issues in dental hygiene.

DHY234
CLINICAL DENTAL HYGIENE III **5** **15**
Pre-Req: DHY232
Supervised clinical patient care experiences that correlate with, and allow application of, dental hygiene procedures and lecture concepts presented in Dental Hygiene Theory III. Development of proficiency in implementing treatment plans to meet individual patient's oral health needs. Emphasis on self-evaluation and quality assurance.

Credit Hours | Contact Hours

Engineering Computers

ECA122
COMPUTER APPLICATIONS FOR TECHNICAL PROFESSIONAL **3** **4**
This course describes the components and peripherals of a computer/PC and how they function and communicate as a system. Principle topics covered are the Windows operating system, internet applications, MS-DOS, the Windows networking environment and a variety of software application packages used to solve scientific, business and engineering technology problems.

ECA127
PROGRAMMING LOGIC AND PROBLEM SOLVING **3** **4**
This course addresses the student to program logic and problem solving techniques. Primary emphasis is on achieving familiarity with structured programming principles through awareness and application of structured programming and object-oriented concepts and techniques. Upon course completion, the student should have an understanding of how to develop the logic to solve a programming solution using structured flowcharts and psuedocode.

ECA128
VISUAL BASIC PROGRAMMING **3** **4**
Pre-Req: ECA127
Addresses designing, developing, testing, and deploying desktop software applications using the Microsoft Visual Basic.Net programming language. This course will help prepare the student for MCSD test 70-306: Developing and Implementing Windows-based Applications with Microsoft Visual Basic.Net. Upon completion of this course, the student should be able to develop a desktop application with a graphical user interface, write code using Visual Basic control structures, properly validate user input, and test and debug the application.

ECA129
CRYPTOGRAPHY **3** **4**
Pre-Req: ECA127 or CAP121, MTH121
Communication techniques over non-secure channels are presented. Mathematics and computer science concepts are used to design and program encryption/decryption systems. Kerchoff's principle for modern crytography is stressed. Through a set of hands-on exercises, the student will become familiar with symmetric key and public key encryption/decryption methods.

ECA130
SOFTWARE VULNERABILITIES **3** **4**
Pre-Req: ECA127, EET131, EET141
Enumeration, exploits, keygens and other application vulnerabilites are presented. Security holes and exploitations in computer, interpreted and Web based applications are addressed in a hands-on environment.

ECA131
MS WINDOWS XP AND 2003 SERVER **3** **4**
Pre-Req: EET131, EET141
Course includes installing and administering the Windows XP Professional and Windows 2003 Server Operating Systems. It also covers security issues, installation troubleshooting, and desktop configuration.

ECA132
HELP DESK CONCEPTS **3** **4**
This course provides the student with essential topics covering help desk operations, roles and responsibilities of the analysts, help desk processes and procedures, tools and technologies, performance measures, and the help desk setting itself. There are numerous hands-on projects to practice implementing help desk concepts in a real world situation. Upon completion, students will have a skills to explore in greater detail various help desk tools, situations, and user conflicts and resolution.

Credit Hours | Contact Hours

ECA133
RESIDENTIAL COMPUTER USER SUPPORT 3 4
Pre-Req: ECA132
This course addresses topics that help-desk analysts will use on a daily basis. Course includes computer user support, customer service skills, troubleshooting skills, common support problems, help desk operations, and support management. Upon completion students will be prepared to install, integrate and troubleshoot the following automated home sub-systems; home security, audio-video, computer networks, cable/satellite, and broadband. This course helps students prepare for the Comp TIA HTI+ certification test.

ECA134
CCNA PHASE I 2 3
Pre-Req: EET141
This course introduces students to the networking field. Upon completion of this course, students can perform entry-level tasks in the planning, design, installation, operation, and troubleshooting of Ethernet and TCP/IP networks. Technologies include networking mathematics, terminology, models, media, LAN and WAN testing and cabling, Ethernet operation, switching, IP addressing and subnetting, IP, TCP, UDP, and application layer protocols.

ECA135
CCNA PHASE II 2 3
This course focuses on initial router configuration, Cisco IOS software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Students will learn how to configure a router, manage Cisco IOS software, configure routing protocols on routers, and set access lists to control access to routers. Technologies include Cisco IOS Software Management, router configuration and file management, RIP and IGRP routing protocols, TCP/IP error and control messages, and Access control lists.

ECA136
PRINCIPLES OF INFORMATION SECURITY 3 4
Pre-Req: ECA125, EET141
This course examines the current standard of due care and best business practice in information security. Demonstrations and hands-on practice will reinforce topics such as evaluation and selection of security models, risk management, threat analysis, organizational technology evaluation, security implementation, disaster recovery planning and security policy formation and implementation. Upon completion, the students will be able to examine security technology, methodologies and practices.

ECA137
COMPUTER CRIME AND INVESTIGATION 3 4
Pre-Req: EET131
This course provides an overview of cyber crime and computer related crime issues facing businesses and the criminal justice system. Demonstrations and hands-on practice will reinforce topics such as how computers are used in crime, interview techniques, search warrants, evidence handling, chain of custody, identification and recovery of computer data, report writing, case preparation, and courtroom testimony. Upon completion, the students will be able to understand government response to cyber crime issues from a law enforcement perspective.

ECA138
WEB DESIGN 3 4
This course covers creating and editing backgrounds and graphics for use on the internet. Students will learn appropriate design skills and techniques, design language and study color relationships through demonstrations and hands-on practice in order to reinforce the concepts as they use various leading edge technologies to create graphics. Upon completion of this course, students will be able to analyze Web graphics and design; develop Web graphics; optimize images for the Web and understand the concepts of design as they relate to the Web.

Credit Hours | Contact Hours

ECA139
MICROSOFT SQL SERVER DATABASE DES 3 4
Pre-Req: ECA253
This course provides students with the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft SQL Server 2000. Through a system of lessons and hands-on exercises students will gain practical experience using Transact-SQL and Data Transformation Services (DTS) to manipulate data; programming business logic using stored procedures, transactions, triggers, user-defined functions, and views; optimizing database performance by using SQL Profiler and the Index Tuning Wizard; and managing security – data access, object-level security, and application roles. As students build these real-world database administration skills, they will also be prepared for the corresponding Microsoft certification exam. Upon completion, students will have the knowledge and skills necessary to develop Transact-SQL statements to manage Microsoft SQL server databases and database objects.

ECA142
ORACLE DTBSE 10g: INTRODUCTION TO SQL 3 4
Pre-Req: ECA253
This course introduces Oracle Database 10g technology and the relational database concepts and the powerful SQL programming language. This course provides the students with the essential SQL skills of querying the database, the meta data and creating database objects. This course is designed to prepare you for the corresponding Oracle Certified Professional exam. Demonstrations and hands-on practice reinforce the concepts. Upon completion, the student should have the confidence and skill to develop, maintain and utilize SQL scripts and code.

ECA143
PLANNING, DESIGNING AND IMPLEMENTING IMAGING SYSTEMS 3 4
Pre-Req: ECA132
In this course, students will learn the skills to be competent and professional in the document imaging/document management industry. They will gain a level of expertise in the technology and best practices used to plan, design, and specify a document imaging, management system. A hands-on approach will allow the student to learn by doing while organizing document imaging and management systems for use in multiple business applications. The student will work through prepared assignments using a popular software package. Upon completion students will be prepared to work with and recommend document imaging software and document imaging solutions. This course helps prepare students for the CompTIA CDIA+ certification test.

ECA144
INTERNET, INTRANET AND EXTRANET TECHNOLOGY 3 4
Pre-Req: ECA132
Students will learn to identify the function of URLs and diagnose issues that affect internet functionality. Additional topics will include designing and maintaining HTML-based World Wide Web pages and the role of software packages to support internet clients. Upon completion students will be able to explain and appreciate the power that programming and database access add to a Web site. This course helps prepare students for the CompTIA i-Net+ certification test.

ECA145
PC UPGRADING AND MAINTENANCE 3 4
The student will be working with various operating systems such as DOS, Windows 98, 2000 and XP. Student will also have hands-on experience building and repairing PC's in a lab environment. Hardware topics include: system board, microprocessors, busses, memory, disk drives, and power supplies.

ECA146
INTRODUCTION TO COMPUTER NETWORKING 3 4
Fundamentals of networking, which includes sharing computer resources, protocols, cables and adapters, E-mail, network, inter-operability and management is covered. Various network products are described and compared.

Credit Hours | Contact Hours

ECA147
ADVANCED MICROSOFT APPLICATION 3 4
Pre-Req: ECA122 or BCA120
This course is designed to present Microsoft Office concepts in further detail. MS Word, Excel, PowerPoint, and Outlook will be covered at an advanced level required by most tier 2 help desks. Upon completion, students should be able to troubleshoot and provide technical support for sophisticated documents, workbooks, presentation and e-mail related issues.

ECA148
SPREADSHEET ANALYSIS 3 4
Pre-Req: ECA122
Excel is a powerful tool capable of performing a variety of analytical functions used for budgeting, accounting and financial analysis. Applications created will include statistical, logical, financial and string functions, graphics, data manipulation, macros, "what-if" analysis, programming custom menus and transferring data to/from other software. Upon completion, students should be able to plan, implement, test and document complex spreadsheet models.

ECA149
INTRODUCTION TO COMPUTERS 1 1
This course offers students an introduction to computer concepts. The class covers basic computer components, including hardware and software. Students are taught to identify the basic components of a computer, use hardware peripherals, identify the major components of the Windows desktop, use many of the Windows operating system features, start and exit application software, use a browser to access the Internet, and use e-mail.

ECA150
INFORMATICS 3 4
Pre-Req: ECA253
This course studies the concepts, practices and tools underlying the study of informatics. Topics include, but not limited to: information representation and infrastructure, Meta date, the Semantic Web, knowledge management, data warehousing, data mining, user interface, analytical tools, careers, industry trends, social, global and organizational impacts, and applications in medical, health, biological, as well as business, industry and education. Upon completion, students will be well versed in the methods of using Excel, Access, and data analysis tools in solving informatics problems. Hands on use of each tool are experienced and combined with directed data analysis, integration, and migration activities. Additional topics include the use of SQL queries on data for transferring, manipulation, and analyzing clinical, medical, biological, and other health related data.

ECA151
ORACLE DATABASE 10G:PL/SQL PR 3 4
Pre-Req: ECA253, ECA142
PL/SQL programming and tuning is an intense hands-on course that is designed to give the student maximum exposure to Oracle PL/SQL tuning and optimization. The student learns by doing dozens of in-class exercises and the student will be guided from very simple PL/SQL tuning to advanced PL/SQL performance optimization. The topics start with the basics of SQL and progress into increasingly complex queries, including table joins, subqueries and creating Oracle views. The PL/SQL section begins with simple concepts and the student gradually masters PL/SQL through increasingly challenging classroom exercises.

ECA152
MICROSOFT ACCESS DATABASE 3 4
This course covers advanced concepts of the Microsoft Access application. Topics include Database Management Systems and the conceptual analysis of their purpose and use. A hands-on approach will allow the student to learn by doing while organizing data for use in multiple business applications. The student will work through prepared assignments using a popular software package. This course is designed to prepare you for the corresponding Microsoft Office exam. Upon completion, the student should be able to develop confidence and skill by developing, maintaining and using database applications.

Credit Hours | Contact Hours

ECA153
INTRODUCTION TO THE INTERNET 1 2
This course is designed to teach students to use the Internet in a productive way through effective use of computer hardware and software. It will cover, through lecture and hands-on exercises, the basic tools, services and methods used for working with the Internet. Students will learn how to access the large collection of resources available on the Internet and how to communicate with other Internet users. Also covered will be the basics on how the Internet works. Upon completing the course, the student should have a basic understanding of the Internet and should be able to use basic Internet access tools to access the Internet.

ECA154
INTERNET DESIGN TOOLS 3 4
Pre-Req: ECA228
Upon completion of this course, the student will have mastered implementation of Macromedia Dreamweaver to rapidly develop Web sites, client side scripting and server side scripting, including database connection. Graphic development with Macromedia Fireworks is also introduced including Fireworks and Dreamweaver integration.

ECA155
FLASH ANIMATION 3 4
Pre-Req: ECA122
This course introduces the students to Macromedia Flash. The student will learn to work with Flash effectively and master the basic concepts of animating with Flash. Topics include developing animations and tutorials with Flash. Programming in Flash with Actionscript is briefly introduced.

ECA156
GAME DESIGN 3 4
Categories of video games, design principles related to different processing platforms, current animation techniques, current software packages available for creation of video games are all major topics. The focus of this course is to familiarize the student with design technologies and software available to implement animation used for video games. The student will gain an overall view of the gaming industry.

ECA220
ISERIES OPERATING ENVIRONMENT 3 4
Pre-Req: ECA122, ECA127
Addresses the fundamental operations, screens and terminology of the iSeries operating system. Exposure is given to different CL commands and menus used to create, maintain, and manipulate libraries, objects and members on the iSeries. Students should gain an understanding of object structure, utilities and database management capabilities and the Control Language.

ECA222
C++ PROGRAMMING 3 4
Pre-Req: ECA127
This course focuses on software engineering concepts, control structures, functions, arrays, pointers and strings found in C++. In addition, the course also examines data abstraction, classes, and operator overloading in C++. Principles of good software engineering are emphasized. Hands-on labs prepare students to solve real-world problems.

ECA223
JAVA PROGRAMMING 3 4
Pre-Req: ECA127
This course provides students with a solid foundation in the Java programming language. Students will be able to write application programs to access data, solve problems, and display graphical output windows. Students will become familiar with JAVA data types, control structures, and classes. Students will create applets to add animation to Web pages.

	Credit Hours	Contact Hours

ECA224
ADVANCED C++ PROGRAMMING 3 4
Pre-Req: ECA222
Students will complete a collection of hands-on lab exercises to create software using the Visual C++ programming language. Students will take advantage of the object-oriented approach to design, develop and utilize components using the Microsoft Component Object Model.

ECA225
CLIENT SIDE SCRIPTING 3 4
Pre-Req: ECA228
Upon completion of this course students will be able to develop interactive Web sites using JavaScript. Various assignments enhance the student's ability in JavaScript, including interaction with the browser, regular expressions and form validation.

ECA226
WINDOWS PROGRAMMING WITH C# 3 4
Pre-Req: ECA127
In this course the student will learn to design, create, test, deploy, maintain and support desktop software applications using Microsoft Visual C#.Net2003. The student will complete a series of hands-on lab exercises using Visual C#. This class will help prepare the student to take MCSD certification exam Windows-Based Application with Microsoft Visual C#.Net, Exam 70-316.

ECA227
ASSEMBLY LANGUAGE 3 4
Pre-Req: ECA222, ECA223
The relationship between software languages and computer architecture is presented. This course examines assemblers, specification and translation of programming languages, linkers and loaders, block structure languages, parameter passing mechanisms and a comparison of programming languages.

ECA228
INTERNET/INTRANET DESIGN AND DEVELOPMENT 3 4
Upon completion of this course, the student will be able to develop a basic Internet/Intranet Web site. Students learn the basics of Web design and client side mark up languages including HTML, CSS, XHTML, and XML.

ECA229
MICROSOFT SERVER SIDE SCRIPTNG 3 4
Pre-Req: ECA228
This course focuses on server side programming with ASP.Net 2.0. Students learn to connect to a database, add, update, and delete from the database, create user controls, master pages, XML driven site navigation and login pages. ASP.Net 2.0 Web controls are emphasized.

ECA230
JAVA WEB DATABASE PROGRAMMING 3 4
Pre-Req: ECA223
Examines the design and use of relational databases. Normalization rules, graphic user interfaces, JDBC, SQL, Java Server Pages, Java Servlets and relational database management systems are principal topics. A collection of hands-on labs illustrates the use of Web-database technologies.

ECA233
ANALYZING SOFTWARE REQ AND DEVELOPMENT SOLUTIONS 3 5
Pre-Req: ECA224 or ECA230 or ECA239 or ECA128 or ECA229 or ECA236 or ECA247
Presents the System Development Life Cycle methodology to investigate, analyze, design and implement a computer software solution to a simulated or actual real-world business problem. Students working in small groups will perform the Preliminary Investigation for a systems request, perform fact finding to create the System Requirements Document, use logical modeling tools (DFD, Flowchart, Decision Tables), use input and output design principles, and Application Development tools. Student will be required to present and demonstrate their completed and functional Systems Project. This course has a pre-requisite: completion of two software development language courses.

ECA234
ADVANCED WEB DEVELOPMENT 3 4
Pre-Req: ECA228
This course focuses on developing Web pages with the latest design and development techniques such as Web pages created entirely using a CSS layout. Usability is emphasized as well as Web site documentation.

ECA236
OPEN SOURCE SERVER SIDE SCRIPT 3 4
Pre-Req: ECA228
Students learn to develop server side scripts with PHP including developing various Web applications and connecting to a MySQL database. Additional topics include the development and design of the MySQL database. Upon completion, students will be capable of utilizing PHP to develop Web applications and connect to a MySQL database.

ECA239
ADVANCED JAVA PROGRAMMING 3 4
Pre-Req: ECA223
Design, creation, testing, deployment, maintenance and support of software applications using Sun Microsystem's Java language are illustrated through a collection of practical, hands-on lab exercises and lectures. Applications focus on the multi-threaded, networking and multimedia aspects of the Java language. Helps prepare students for specific Sun Microsystem certification test: Sun Certified Programmer for the Java Platform.

ECA240
ADVANCED GAMING AND SIMULATION TOPICS 3 4
Pre-Req: ECA262
This course explores topics in the area of 2D and 3D game programming. The students will develop a variety of software projects related to the gaming and simulation areas.

ECA241
3D GAME PROGRAMMING 3 4
Pre-Req: ECA222, IMT227
This course focuses on 3D game programming. The student will learn the essentials of 3D game programming, including basic algorithms, texture mapping basics, 3D math, lighting, etc.

ECA244
MICROSOFT WINDOWS SERVER 2003 NETWORK INFRASTRUCTURE 3 4
Pre-Req: EET131, EET141
Course includes planning, implementing, managing, and maintaining a Windows 2003 Network Infrastructure. Topics include DHCP, DNS, routing and remote access, TCP/IP addressing, and networking monitoring.

ECA245
DES SEC FOR WINDOWS 2003 NETWORK 3 4
Pre-Req: ECA244 or ECA251 or EET252
Course covers the topics required to gather and analyze business requirements for a secure network infrastructure and design. Students design a solution that meets those requirements (costs, security, hardware, software, licensing and resources) using a Windows 2003 network infrastructure.

ECA246
ADM, IMPL AND DES DIRECTORY SERV 3 4
Pre-Req: ECA244 or ECA251 or EET252
Course thoroughly covers both the logical and physical structures of Active Directory and Exchange Server. Some of the topics covered and accomplished during lecture time and lab time are the installation of Exchange Server, Active Directory, DNS, and dhcp. Students create and maintain user accounts and group policies on their own domains.

	Credit Hours	Contact Hours

ECA247
ADVANCE XML AND WEB SERVICES 3 4
Pre-Req: ECA229
An advanced course in .Net development focusing on ADO.Net, XML and Web services. Topics include dataset, dataTable, dataAdapter, web. config, webParts converting database data to XML and back, concluding with creating and consuming Web services. ASP.Net controls are also taken to the next level centering on advanced database techniques.

ECA248
CITRIX METAFRAME 3 4
Pre-Req: ECA244 or EET252 or ECA251
This course provides the necessary foundation to utilize Citrix MetaFrame products. It will cover the installation and administration of Citrix MetaFrame and Citrix ICA clients in a variety of network environments. Topics will include using the Citrix Management Console, managing licensing and administering MetaFrame servers.

ECA250
CCNA PHASES III AND IV 4 5
Pre-Req: ECA135 or ECA249
This course will cover switching, virtual LANS (VLAN), LAN design, IGRP, Novell IPX, network management, WAN design, ISDN, and frame relays in a cisco system lab environment.

ECA252
DATA MINING AND DATA WAREHOUSING 3 4
Pre-Req: ECA253
This course provides a thorough practical coverage of the techniques used to build a warehouse including requirements definitions, extract-transformation-loads of data, query applications and executive information systems. Additionally, data mining algorithms and techniques that identify expected and unexpected trends in data stored in a warehouse will be covered. Upon completion students will be able to design, implement and use a data warehouse and use data mining tools to analyze and identify patterns in data.

ECA253
DATA MODELING AND DATABASE DESIGN 3 4
Pre-Req: ECA122
This course introduces database concepts and describes how to properly design, create and interface with a relational database. The course begins with definition of important terms. It demonstrates the specific rules that one must follow to design and create a normalized relational database. SQL is also an important topic. Students complete a collection of hands-on labs to learn how to apply the techniques presented.

ECA254
UNIX/LINUX SHELL SCRIPTING 3 4
Pre-Req: EET257
Students learn how to combine standard unix commands and utilities together in Bourne style shell scripts for automation of system administration tasks and data manipulation and reporting. Emphasis is on redirection, looping, command substitution, redirection, process control and regular expressions. Other topics addressed include database interaction, various markup language (LateX and HTML), perl, awk, and sed scripting.

ECA255
MICROSOFT PROJECT TOOLS 3 4
Pre-Req: ECA122
This course focuses on Microsoft tools such as Microsoft Project and Visio. Students will complete a major project, and will examine and analyze all elements of these projects. Upon completion, students will be able to use these tools to manage and develop processes such as planning, budgeting, and applications design and delivery.

	Credit Hours	Contact Hours

ECA256
DISASTER RECOVERY AND INCIDENT PLANNING 3 4
Pre-Req: ECA244
This course is a detailed examination of the aspects of contingency planning operations. Demonstrations and hands-on practice will reinforce topics such as incident response-prevention, detection, reaction, disaster recovery, and business continuity. Upon completion, the students will be able to provide documentation for a disaster recovery plan.

ECA257
FILE SYSTEMS ANALYSIS 3 4
Pre-Req: ECA137 or EET260
This course is a comprehensive overview of contemporary volume and file systems. Topics include, discovering hidden evidence, recovering deleted data, data structures, and tool validation. Students will analyze example disk images, and participate in advanced investigation scenarios.

ECA258
CYBER FORENSICS AND DATA RECOVERY 3 4
Pre-Req: ECA257
This course presents methods to properly conduct a computer forensics investigation while mapping to the objectives of the International Association of Computer Investigative Specialist (IACIS) certification. Demonstrations and hands-on practice will reinforce topics such as finding evidence in file metadata, analyzing partitions and data structures, and identifying hidden data on a disk's Host Protected Area. Upon completion, the students will be able to gather evidence from disk images document findings.

ECA259
SUPPORTING USERS AND TROUBLESHOOTING DESKTOP 3 4
Pre-Req: ECA122, ECA132
This course teaches students how to support users running applications using Microsoft Windows XP Professional in a corporate environment or Microsoft Windows XP Home Edition in a home environment. Students will use applications that are included with the operating system, such as Microsoft Internet Explorer and Microsoft Outlook Express, as well as productivity applications such as Microsoft Office applications. Upon completion students will be able to resolve applications problems that occur within by using various methods such as telephone connecting to an end user's system remotely, or by going to an end user's site or computer. This course helps prepare students for the corresponding Microsoft (MSCDST) certification exam.

ECA260
SOFTWARE ENGINEERING FOR HAND-HELD DEVICES 3 4
Pre-Req: ECA223
This course focuses on the use of the Sun Java Wireless Toolkit as a set of tools to help develop wireless applications based on J2ME's Connected Limited Device Configuration (CLDC) and Mobile Information Device Profile (MIDP). The student will learn how to develop applications which are designed to run on cell phones, mainstream personal digital assistants, and other small mobile devices. The student will learn how to use the emulation environments which are built into the toolkit to develop applications for cell phones.

ECA261
SOFTWARE ENGINEERING FOR ROBOTIC 3 4
Pre-Req: ECA223
This course integrates the mechanical capabilities of a small robot with the logic of a custom software program written in the Java programming language. Upon completion of this course, the student will be able to: display messages on the robot's LCD screen(s), move the small robot in a predetermined manner, interface programmatically with sensors attached to the robot, and keep track of the location of the robot.

	Credit Hours	Contact Hours

ECA263
SUPPORTING USERS AND TROUBLESHOOTING MICROSOFT WINDOWS 3 4
Pre-Req: ECA122, ECA132
This course teaches students how to utilize Microsoft Windows XP Professional in a corporate environment or Microsoft Windows XP Home Edition in a home environment. Students will use applications that are included with the operating system, such as Microsoft Internet Explorer and Microsoft Outlook Express, as well as productivity applications such as Microsoft Office applications. Upon completion students will be able to resolve operating system issues using various methods such as telephone, connecting to an end user's system remotely or by going to an end user's site or computer. This course helps prepare students for the corresponding Microsoft (MCDST) certification exam.

ECA264
IT PROJECT MANAGEMENT 3 4
Pre-Req: CAP255
Students will be involved in the design, development, and management of various IT projects. Using these hands-on labs, students will develop a competency and professionalism in IT project management including the necessary business knowledge, interpersonal skills, and project management skills required to successfully manage IT projects. Topics in this course incorporate universal project management principles, and include important skills such as conflict resolution, negotiation, communicating, team building/leadership, and setting and managing expectations. Upon completion, students will have skills to explore the greater detail various project management tools, such as scheduler, spreadsheets, and databases. This course helps prepare students for the Comp TIA IT Project+ certification test.

ECA265
GENERATING REPORTS FOR DECISION-MAKING 3 4
Pre-Req: ECA122
In this course students will gain extensive experience using Crystal Reports to connect to databases, retrieve raw data, format the data, create reports, and present the reports to internet and intranet users. Topics will include: developing reports using Crystal Reports to transform data into meaningful information, creating graphical and crosstab reports, adding calculations and program logic with the Formula Workshop, connecting to data sources natively via ODBC and OLE DB, analyzing database structure and extract the data you need to meet your reporting needs and deploying reports to Web browsers, Visual Basic and .NET.

ECA266
SEARCH ENGINE OPTIMIZATION 2 3
Pre-Req: ECA228
This course focuses on optimizing HTML code for search engine placement. Topics include link building, natural optimization vs pay per click, understanding Web statistics and conducting online PR campaign.

ECA267
ADVANCED FLASH ANIMATION 3 4
Pre-Req: IMT126
Learn how to develop cartoon characters online and use them in Web site marketing. Each aspect of character drawing taken step by step is concluded with developed a complete character. Various animation techniques are applied to the character culminating in a complete animation.

ECA268
ADVANCED PHP 3 4
Pre-Req: ECA236
As advanced course in PHP and MySQL focusing on Web database integration. Learn more advanced techniques such as image/file uploads and AJAX integration and develop a complete content management system in PHP and MySQL.

	Credit Hours	Contact Hours

ECA269
MICROSFT SQL SERVER 2005 ANALYSIS SERVICES 3 4
Pre-Req: ECA139
In this course, students will learn how to use SQL Server Analysis Services. Students will learn how to build flexible and powerful solutions that meet the analytical needs of an organization. Topics include building cubes using the Microsoft Visual Studio 2005 Business Intelligence designers, Creating dimensions and measure groups to build, browse, and modify OLOP cubes. Designing objects to handle unique financial analysis requirements. Improving query performance with aggregations and user hierarchies. Customizing cubes with multi-dimensional expressions (MDX) and other advanced design techniques. Using actions to integrate Web pages, reporting applications, and drill through capabilities with cubes. Managing role-based security and restrict data access. Deploying and maintaining a database in a production environment CD features.

ECA270
ORACLE DATABASE 10g: ARCH AND ADMINISTRATION I 3 4
Pre-Req: ECA251
Co-Re: ECA271
Introduction to Oracle Administration and Management is a course designed to provide students with an in-depth understanding of the basic features of Oracle including object-orientation, partitioning and advanced Oracle features for the Internet. The goal in this course is to cover the Oracle architecture and internal mechanisms such that the student is able to perform basic DBA tasks such as database creation, startup and shutdown, and database management. The course also covers Oracle networking basics and the Oracle utility programs. Hands-on exercises are used to demonstrate each feature and the student will gain first-hand experience in the key Oracle DBA concepts.

ECA271
ORACLE DATABASE 10g: ARCH AND ADMINISTRATION II 3 4
Pre-Req: ECA151
The primary goal in this course is to prepare the students to install, configure and implement backup and recovery systems in Oracle. This course is designed to provide students with an in-depth understanding of the backup and recovery features of Oracle, specific Oracle concepts and knowledge required for RMAN and the student will gain first-hand experience in the key Oracle backup and recovery concepts.

ECA272
MICROSFT SQL SERVER 2005 REPORTING SERVICES 3 4
Pre-Req: ECA139
In this course, you will learn how to use SQL Server 2005 Reporting Services to create, execute, and manage reports. You will learn how to create tabular, matrix (cross-tab), and chart reports using Visual Studio 2005 and SQL Server 2005 Business Intelligence Studio. You'll explore creating reports with groups, expressions, conditional formatting, and parameters. The reports you create in the course will employ shared data sources, interactive sorting, and drill-down capabilities. You'll explore the deployment and printing of reports and the export of reports to PDF, Excel, and other formats. You'll gain a thorough understanding of Reporting Services security, report snapshots, subscriptions, and the use of custom assemblies. You'll also discover how to integrate reports into your ASP.NET and Win Forms applications using URL access and the Reporting Services Web Service API, without requiring user to use Internet Explorer. Finally, you'll learn how to empower your users to create ad-hoc reports using Report Builder and Report Model projects.

Credit Hours | Contact Hours

ECA273
MICROSOFT SQL SERVER ADMINISTRATION 3 4
Pre-Req: EET252 or ECA131 or EET251
This course is designed to provide the student with the concepts and hands-on experience with Microsoft SQL Server databases. The primary focus is on learning SQL server from the Datable Administration perspective. Upon completion, the student will have attained at least a basic administration skill level with SQL Server database.

ECA274
UNIX/LINUX SYSTEM ADMINISTRATION 3 4
Pre-Req: EET257 or ECA221
This course covers administration and configuration of Unix and/or Linux operating systems. Topics include: adding/maintaining user accounts, bootup, shutdown, runlevels, daemons, backup and restoring files, basic network configuration, policies and ethic, process control, file systems, log files. During the lab, the student will install Linux on a personal harddrive and be the administrator of their personal system. Students will add users, schedule cron jobs, add file systems to their system, etc.

ECA275
ETHICAL HACKING 3 4
Pre-Req: EET257 or ECA131
In this course, students learn to discover weaknesses in operating environments using the well known hacking methods. Students will acquire the knowledge to systematically test and exploit internal and external defenses. Students will learn the countermeasures used to mitigate and reduce risk to enterprise networks. Students will be taught how to crack security systems so they can advise organizations on how to protect their systems.

ECA276
UNIX/LINUX NETWORK ADMINISTRATION 3 4
Pre-Req: EET257 or ECA221
This course addresses administration and configuration of network server software found on the Unix and/or Linux operating systems. Students will install a Linux server of their personal harddrives, setup various types of network servers. Many labs will require students to work together to test each other's server configurations. Server topics include: DNS, xinetd, electronic mail, network file sharing, etc. Security topics include: iptables, PAM, tripwire and tiger.

ECA277
UNIX/LINUX OPERATING ENVIRONMENT 3 4
Pre-Req: ECA221
This course covers working at the Unix/Linux shell command line, customizing the shell environment, understanding basic file system structure and permissions, file management tools, basic shell scripting techniques, vi text editor, data processing tools, Xserver, Xwindows, remote machine access using SSH&FTP, compiling C programs under Unix, and formation of makefiles and the make command.

ECA278
FIREWALL AND NETWORK ADMINISTRATION 3 4
Pre-Req: ECA127 or EET252 or ECA251
This course provides the technology essentials for a Web developer to design and develop secure E-Commerce solutions. Techniques such as the Luhn Algorithm and 128 bit encryption will be explored and implemented.

ECA279
WEB SERVER ADMINISTRATION 3 4
Pre-Req: EET250 or EET251
This course covers the installation and configuration of the Apache Web server and the server handware that supports it. Demonstrations and hands-on practice will reinforce topics such as virtual hosts, authentication, virtual domains, CGI, PHP, and SSL. Upon completion, students will be able to administer the hardware and operating environment of Web servers.

Credit Hours | Contact Hours

ECA280
ADVANCED INFORMATICS 3 4
Pre-Req: ECA150
This course introduces programming language modules in the analysis of informatics and bioinformatics data, including downloading, installing and configuring these applications in a Windows environment. Using these language modules, this course will show the student how to retrieve, analyze and manipulate genomic/proteomics sequences from databases such as GenBank and GenPept, RefSeq, SWISSPROT, and EMBL. It will show how to use these language modules to convert between and from various file formats including FASTA, SWISSPROT, and EMBL. It includes extracting annotations/features from sequence files, performing similar sequence searches and using sequence alignments. Upon completion, students will know how to use various programming environment to solve programming problems such as creating, modifying, comparing and deleting biological data files, searching for motifs in these data files, manipulating sequences found in these data files.

ECA281
2D GAME PROGRAMMING 3 4
Pre-Req: ECA222
This course focuses on 2D game programming. The student will learn the essentials of 2D game programming, including basic algorithms, collision detection and mathematic algorithms.

ECA282
FLASH WEB PROGRAMMING 3 4
Pre-Req: IMT126 or ECA155
This course focuses on using Flash for Web site creation. The student learns to use actionscripting to interact with Flash, load external data and create complex sites using components.

Early Childhood Education

ECE121
INTRODUCTION TO EARLY CHILDHOOD EDUCATION 3 3
Pre-Req: ENG105
This course introduces the field of early childhood education and child care history, philosophies, goals, practices and professional affiliation; explores the range of prekindergarten programs, as well as examines career opportunities, qualification, and the role of the educator/caregiver. Observation and recording of infant/child behavior are also introduced. Fifteen observations hours are required.

ECE122
CURRICULUM DESIGN AND INSTRUCTION 3 3
Pre-Req: ECE121
Studies theory and practice of instructional design and delivery for children birth to eight. Goal-setting, curriculum design, lesson planning and instructional methods based on NAEYC guidelines. Emphasis is placed on developmentally-appropriate, integrated and thematic instruction. Skill development is fostered in observing and recording behavior and evaluation/assessment of children's needs, levels and progress. Includes use of a wide range of educational media. Fifteen field observation hours required.

ECE123
HEALTH AND NUTRITION 3 3
An examination of health and nutritional needs, issues, practices and state licensing as it relates to early childhood programs. Stress management, environmental design and working with children with special needs are addressed. Five observation hours required.

ECE124
INFANT TODDLER CURRICULUM 2 2
Pre-Req: PSY125
Studies theory and practice of infant toddler curriculum, including current research. Goal setting, curriculum design, lesson planning and instructional methods based on NAEYC guidelines. Five observation hours are required.

Credit Hours | Contact Hours

ECE125
CHILDREN WITH PHYSICAL EXCEPTIONS 3 3
This course examines the range of service needs for students with mild to moderate physical impairments using an interdisciplinary team approach. Problem solving approaches and decision making models for use of adaptive materials, equipment, and intervention techniques are examined for assessment, planning, and service delivery. Five field observation hours are required.

ECE126
EDUCATIONAL TECHNOLOGY 3 3
Encompasses effectively identifying, locating, evaluating, designing, preparing and efficiently using educational technology as instructional resources in the classroom as related to principles of learning and teaching. Students will develop increased classroom communication abilities through lectures, discussions, modeling, laboratory experiences and completion of a comprehensive project.

ECE221
LANGUAGE ARTS 3 3
Pre-Req: ECE122
Examines strategies and techniques for supporting and encouraging young children's emerging literacy development, including pre-writing/writing, pre-reading, reading and language development. Includes orientation to children's literature, application of the whole language approach and utilization of children's interest. Ten field observation hours required.

ECE222
CREATIVE MAT/GUIDE PLAY 3 3
Pre-Req: ECE122
Examines a comprehensive, caring, and developmentally-appropriate approach to guiding children's personal and social development. Emphasis is placed on a guidance approach to discipline. Designing and applying developmentally appropriate creative materials and activities are explored. Ten field observation hours required.

ECE223
COMMUNITY AND FAMILY-BASED PROGRAMS 3 3
Pre-Req: ECE121
An examination of community and family-based early childhood programs: Head Start, Even Start and public/special needs preschool. Adherence to mandates/guidelines, population served, socioeconomic trends and factors, and how these programs differ from others are studied. Family relations and parenting skills, emphasizing family involvement and empowering parents are studied and related to use in community/family programs. Five field observation hours required.

ECE224
EARLY CHILDHOOD PROGRAM ADMINISTRATION 3 3
Pre-Req: ECE121
Examines key aspects of starting and operating various types of early childhood programs. Policies/procedures, legalities, supervision, finances, planning and organizing, and personnel management are emphasized.

ECE225
THE EXCEPTIONAL CHILD 3 3
Pre-Req: ECE221, ECE222
A study of theories and techniques used in assessment and instruction of learning-disabled, developmentally-challenged and gifted children. Developmental traits of children with special needs are examined, and instruction is studied in light of the inclusion and least restrictive environment models. Five field observation hours required.

ECE226
WRAP-AROUND PROGRAMS 2 2
Pre-Req: ECE121
An examination of public school-age programs designed to "wrap around" the child: before and after school care, summer care, sick child care and other emerging programs. Five field observation hours required.

Credit Hours | Contact Hours

ECE227
PRACTICUM 3 15
Pre-Req: ECE222
A 210-hour, supervised experience working in the early childhood education/caregiving setting. Open only to early childhood education technology majors. Weekly seminar participation required.

ECE228
PHONICS FOR YOUNG CHILDREN 3 3
Pre-Req: ECE221
Explores the theory and role of phonics and phonemics awareness as well as current research regarding phonics instruction. Five observation hours are required.

ECE229
EDUCATIONAL PSYCHOLOGY 3 3
Major theories of human development and learning, motivation instructional strategies, assessment, and similarities and differences in learners are examined. The role of factors in the students' environment that influence students' learning and development are considered. Five observation hours are required.

ECE230
CHILDREN WITH SOCIOEMOTIONAL EXCEPT 3 3
Definitions, causes, and characteristics of students identified with mild to moderate emotional/behavioral disabilities are studied. Social, educational, and emotional implications of learning and development are examined. Methods of assessment and interventions based on developmentally and individually appropriate practice are presented. Five field observation hours are required.

Electrical/Electronic Engineering Technology

EET120
DC CIRCUIT ANALYSIS 4 5
Pre-Req: MTH121
Direct current (DC) circuit analysis. Topics include: voltage, current, resistance, Ohm's law, power, circuit reduction, Kirchhoff's laws, network analysis methods, network theorems, capacitors, inductors, transients and sine wave characteristics.

EET122
AC CIRCUIT ANALYSIS 4 5
Pre-Req: EET120
Alternating current (AC) circuit analysis and instrumentation. Topics include: phasor analysis, RL, RC and RLC circuits network theorems, power, resonance, fitters, pulse analysis, transformers and three phase systems.

EET123
ELECTRONIC DEVICES AND CIRCUITS 4 5
Co-Req: EET122
Theory, characteristics and applications of solid-state devices. Devices covered include: diodes, bipolar junction transistors, field effect transistors, operational amplifiers, analog and digital voltage regulators.

EET125
CIRCUITS MANUFACTURING TECHNIQUES 1 2
Safety in the shop and stages of project development are emphasized. Electrical and mechanical shop practice including use of hand tools, through hole and surface mount, soldering techniques, solderless terminations, wire preparations, wiring techniques and parts ordering.

EET126
ELECTRICAL MACHINES 4 5
Co-Req: EET122
This course covers the principles of electromagnetic induction, dynamo construction, direct current generation characteristics and operation, armature reaction, DC motor characteristics, operation and control, machine efficiency, single and three-phase transformers theory and operation, construction of three-phase transformers, AC motors and generators. Subjects include: polyphase transformers, induction motors, alternators, synchronous motors, single phase induction, universal and specialty motors.

	Credit Hours	Contact Hours

EET128
NEC AND ELECTRICAL SYS DES **2** **3**
Pre-Req: EET122
A study of the National Electric Code as it applies primarily to the design of large commercial and industrial installations. Emphasis is placed on definitions, calculating conductor and conduct size, selection of circuit over-current protection, grounding, service sizing transformers connections, short circuit analysis, and other related subject material.

EET129
OPTICS **2** **3**
Pre-Req: PHY121 or PHY101
This course is complementary physics for students in Electrical/Electronic Technology and related fields of study. Topics include: the physical nature of light, optics, lasers, optics and their relation to the electronic field and fiber optics.

EET142
LIGHT DESIGN, APPLICATION AND ELECTRICAL ELEMENTS I **2** **4**
Develop the skills to design and apply functional and practical lighting systems for industrial and commercial properties. The topics covered include the physical nature of light, color, and sight behavior; and understanding of photometry of light, along with design criteria and calculations including the zonal cavity method; complete coverage of light sources, and application techniques using fixtures, along with the electrical elements necessary for design and controlling of today's and tomorrow's illumination systems.

EET143
LIGHT DESIGN, APPLICATION AND ELECTRICAL ELEMENTS II **3** **3**
This course complements Lighting Design, Application and Electrical Elements I. Topics included are advanced lighting design techniques, including hands-on computer studies and in-depth application workshops within the following areas: industrial lighting, exterior lighting, office and educational facility lighting, public building lighting, merchandise and store lighting, along with special applications such as houses of worship, museums, and recreational areas. Also included are sessions on visual performance, in-depth color evaluation, psychological effects of lighting, lighting for improving productivity, safety and security lighting, lighting economics, and energy-saving techniques, calculations, and evaluations, with guidelines for ASHRAE 90. 1-2001.

EET225
DIGITAL COMMUNICATION AND SYSTEM ANALYSIS **3** **6**
Pre-Req: EET248
Co-Req: EET262
The course deals with implementing data acquisition, instrumentation control, data analysis and presentation. Serial and parallel interfaces are used for the instrumentation communication to the networks (internet and intranet). Programming involves using a graphical user interface (GUI).

EET226
TRANSMISSION AND DISTRIBUTION **3** **4**
Pre-Req: EET122
This course encompasses power transmissions and distribution systems, components and analysis. Field trips to appropriate sites comprise the laboratory requirement.

EET227
PLCs AND INDUSTRIAL CONTROLS I **3** **4**
Pre-Req: EET120, EST130
A presentation of techniques, application and development analysis of relay control circuits with implementation of electromechanical devices, programmable controllers and variable frequency drives. Circuits, devices and techniques studied include control of motor starting, motor speed control, machine cycle control, control components, pilot devices, maintenance and troubleshooting circuits.

	Credit Hours	Contact Hours

EET228
PLCs AND INDUSTRIAL CONTROLS II **3** **4**
Pre-Req: EET227
Application and analysis of microprocessor-based computer systems and programmable logic controllers to industrial control systems. Introduction to closed systems control (PID control) and robot control. Introduction and application of Programmable Logic Control Network Interfaces. Human-machine interfaces topics are also addressed.

EET230
ELECTRONIC CIRCUITS I **3** **4**
Pre-Req: EET123
A study of field effect transistors, and BJT transistors, h-parameters, devise equivalent circuits, small signal analysis, multistage amplification, decibels, feedback, frequency response and large signal amplifiers.

EET231
ELECTRONIC CIRCUITS II **3** **4**
Pre-Req: EET230
A study of power amplifier design, heat sinking, differential amplifiers, operational amplifiers, IC fundamentals, feedback and oscillator circuits.

EET232
INDUSTRIAL ELECTRONICS **3** **4**
Pre-Req: EET123
The course consists of industrial control circuits, such as ladder logic, discrete programmable logic controllers, thyristor phrase control, pulse generation and electronic motor speed control with supporting laboratory exercises.

EET233
TECHNICAL PROJECT ELECTRICAL **1** **2**
Pre-Req: EET123, EET227
A course designed to allow the student to demonstrate capabilities acquired during previous course work in the electrical program. The student will choose an approved project compatible with interest and background. The project may be in the area of controls, machine building, electrical design, or power generation and transmission. The scope will be determined by the project, but in general, will include research, testing, drawing, actual construction, a report and presentation.

EET235
TECHNICAL PROJECT ELECTRONIC **1** **2**
Pre-Req: EET125, EET230, EET248
Designed to allow the student to exercise the capabilities developed in the Electronic Engineering Technology program. The student will choose an approved project compatible with interest and background. Project may be a design, test or microcomputer-based project. During the project, performance will be verified at given intervals with suitable test procedures.

EET244
ELECC TELECOMMUNICATIONS **3** **4**
A course dealing with telecommunications hardware and software. Laboratory exercises address both hardware and software applications.

EET245
TECH PROJ-ELECC TELECOMMUNICATIONS **3** **5**
A course designed to allow the student to use the capabilities developed in the telecommunications program courses to carry a project from concept to completion.

EET246
TECH PROJ - COMP NETWORKING **3** **5**
A course designed to allow the student to use the capabilities developed in the networking program courses to carry a project from concept to completion.

Credit Hours | Contact Hours

EET248
WORKSTATION INTERFACING 3 5
Pre-Req: ECA128
Co-Req: EET262
A study of digital circuitry and current operating systems for port input and output management to microcontroller and personal computer bus architecture. The course includes digital and analog interfacing using serial, parallel ports, and various current interface ports.

EET260
COMPUTER FORENSICS 3 4
Pre-Req: ECA127 or CAP121, EET131
This course presents computer crime investigations. Demonstrations and hands-on practice will reinforce topics such as computer crime, programming in the network monitoring platform, trap and trace techniques and patch level enumeration. Upon completion, the students will be able to provide detailed descriptions of computer crimes and understand the technology related to a response team.

EET261
ADVANCED NETWORKING AND SECURITY TPC 3 5
Pre-Req: ECA129, ECA130, EET131, EET141
Session hijacking, trojans, virii, input validation and other types of attacks are covered in this class. Ghost Mail, NetCat and war dialers will be used as tools to provide counter measures against the computer criminal.

EET262
PULSE AND DIGITAL INTEGRATED CIR 4 5
Pre-Req: ECA128, ECA222, EET127
This course is a study of pulse terminology, number systems and codes, TTL and CMOS IC logic circuits and interfacing, Boolean Algebra and logic simplifications, integrated arithmetic circuits, counter, register, encoders, decoders, multiplexers, and demultiplexers, display devices, IC flip-flops, hardware minimization techniques are also covered in conjunction with logic circuit design.

Emergency Medical

EMS121
BASIC MEDICAL TRAINING (EMT) 5 8
The EMT-Basic course provides theory and practical skills training for managing medical and traumatic situations and follows the objectives as listed in the Ohio Administrative Code. Basic Life Support certification is included. Observation time at an Emergency Facility or EMS Squad is required.

EMS122
PARAMEDIC I/SEMINAR 10 20
Pre-Req: BIO101 or BIO127 or BIO121, EMS121, FST127
This course provides theory and skills at the EMT-Paramedic level for managing medical emergencies including patient assessment, medio-legal issues, airway management, fluid therapy and pharmacology, geriatric care and management of respiratory emergencies. In-hospital training and infield internship are included.

EMS221
PARAMEDIC II/SEMINAR 10 20
This course is a continuation of Paramedic I and includes theory and skills in the assessment and management of cardiac emergencies including rhythm interpretation and dysrhythmia treatment modalities as well as assessment and advanced management of trauma. Also included is management of obstetrical, neonatal and pediatric emergencies. In-hospital training and infield internship are included.

Credit Hours | Contact Hours

EMS222
PARAMEDIC III/SEMINAR 4 6
Successful completion of this course provides opportunity for certification in Advanced or Basic Trauma Life Support and Pediatric Advanced Life Support as well as additional critical care transport skills. This course is designed to prepare the student for National Registry Testing.

English

ENG100
COLLEGE WRITING I 5 5
This introductory writing course emphasizes narrative writing, including generating ideas, flow, and logic. Foundational grammar based on sentence construction is stressed.

ENG103
COLLEGE WRITING II 5 5
Pre-Req: ENG100
This writing course focuses on paragraph development and introduces short essays emphasizing the writing process of drafting, revising, and editing. Narrative writing is stressed.

ENG105
COLLEGE WRITING III 3 3
Pre-Req: ENG103
This writing course emphasizes essay development using rhetorical modes while applying rules of grammar and mechanics.

ENG123
BUSINESS COMMUNICATION 3 3
Pre-Req: ENG124
Teaches application of various forms of business communication, such as letters, memos, resumes, instructions, abstracts/summaries, and a simulated business presentation with emphasis on research, oral reports, and graphics.

ENG124
COLLEGE COMPOSITION 3 3
Pre-Req: ENG105
This course emphasizes writing based on reading with review of essay development, grammar, and punctuation. Emphasis is on the process of drafting, revising, and editing to achieve clarity. A research project requires APA or MLA documentation.

ENG221
TECHNICAL REPORT WRITING 3 3
Pre-Req: ENG124
Course stresses clarity, logic and appropriate organization in informal and formal technical reports. An oral presentation and/or a proposal may be required.

ENG222
MED TECH REPORT WRITING 3 3
Pre-Req: ENG124
Co-Req: HIT223
Health information technology students develop skills in various kinds of technical communications used in their work, such as letters, memos, instructions, short reports, abstracts, summaries and proposals.

ENG224
COMPOSITION AND LITERATURE 3 3
Pre-Req: ENG124
Includes literary selections from fiction, poetry, and drama. Students read, discuss, analyze and write critical interpretations of representative works.

ENG227
WRITING FOR MEDIA 3 3
Pre-Req: ENG124
This course covers writing for the following media: Web, broadcast, and scriptwriting. Students examine basic issues of design and are introduced to stylistic and content requirements involved with creating media-specific text.

Credit Hours | Contact Hours

ENG228
WRITING FOR THE WEB 3 3
Pre-Req: ENG124, ENG224
This course will introduce students to the basics of Web-based writing. Students will study styles of Web writing, as well as practice creating text in the context of the electronic media.

ENG229
GRANT WRITING 3 3
Pre-Req: ENG124, ENG224
Students will study the general and varied requirements of grant writing in a diversity of public and private areas. Hands-on practice will result in a completed grant or simulated grant of some complexity by the end of the semester.

Entrepreneurial

ENT120
ENTREPRENEURSHIP 2 2
Pre-Req: IDS102
This course is designed to introduce students to the entrepreneurial process from conception to birth of a new venture. Students will examine elements in the entrepreneurial process – personal, sociological, and environmental – that give birth to a new enterprise. Critical factors for starting a new enterprise such as alternative career prospects, family, friends, role models, the state of the economy and the availability of resources will be explored. Students will be introduced to practical tools they can use to further their careers in business, both in entrepreneurship and in more traditional company environments. This course simulates the experiences that entrepreneurs undergo in conceiving, launching, and operating new businesses. The course enables students to evaluate an entrepreneurial career for themselves. In doing so, it provides want-to-be entrepreneurs with a framework for selecting, funding, and starting their own new ventures.

ENT121
ENTREPRENEURIAL MARKETING 3 3
Pre-Req: ENT120
Marketing for entrepreneurship will provide entrepreneurs with the marketing information designed for them. Issues such as opportunities for new ventures, pricing, and distribution for entrepreneurial firms and integrating entrepreneurship and marketing research will be discussed in class. Students will develop marketing plans for their new venture.

ENT221
ENTREPRENEURIAL FINANCE 3 3
Pre-Req: ENT120
This course will provide the student with an understanding of the financing of entrepreneurial ventures in terms of payback and breakeven analysis. Risk Management, Forecasting, Pro Forma Financial Statements and Working Capital Management are all issues explored in this course.

ENT222
NEW VENTURE CREATION 2 3
Pre-Req: ENT221
This course builds on the entrepreneurship class and the finance class. New venture exploration will take place as the student researches their idea and develops a working business plan.

ENT223
ENTREPRENEURSHIP PRACTICUM 2 4
Pre-Req: ENT222
This is the capstone experience where the student puts their business plan intro practice. The student will work with mentors to start to apply their entrepreneurial knowledge to real life situations. This course is based on the concept of balanced mentorship, which benefits both the student and the entrepreneur mentor. Students will be assigned to a start up firm in our Center for Entrepreneurial Studies to apply classroom knowledge to an actual work situation.

Credit Hours | Contact Hours

Environmental

ENV121
REGULATIONS AND COMPLIANCE 3 3
This course will review the history of the American environmental movement and will then look at the fundamental concepts of the environmental law and regulation system. Major environmental laws such as the Clean Water Act, Clean Air Act, SARA, NEPA, SUPERFUND, OSHA and RCRA will be reviewed. The primary focus of the class will be to meet the compliance and liability aspects of the various regulations.

ENV123
OSHA 10-HOUR SAFETY ORIENTATION 1 1
This safety orientation course meets the requirements of the Occupational Safety and Health Administration (OSHA) 10-hour training requirement. Students are made aware (general overview) of the most common hazards encountered on the job sites and taught methods (related safety guidelines) to avoid them. Students are introduced to the OSHA standards and requirements as they pertain to general industry. Students that attend the required time and pass a final examination receive a certificate of completion.

ENV124
DOT HM-126F TRAINING 1 1
This course is designed to familiarize the student with Department of Transportation (DOT) hazard communication system related to safety and security issues. The course teaches the students to understand the labels, placards, shipping papers, and markings associated with the transportation of hazardous materials. The student learns to use the Hazardous Materials table and the Emergency Response Guidebook to identify hazards. The course includes labeling exercises, form completions, and self-tests. Students learn to access the DOT Regulations and Code of Federal Regulations (CFR) through online links. Students that successfully complete this course receive a certificate of completion.

ENV125
INTRODUCTION TO HAZARDS MATERIALS AND WASTE MANAGEMENT 1 1
This course is designed to introduce the student to the hazards of all chemicals produced or imported as well as laws and regulations governing the management of solid and hazardous wastes. It is intended to satisfy training requirements of the OSHA Hazard Communication Standard (29 CFR Part 1910.1200(h)) and applicable EPA solid and hazardous waste regulations (40 CFR Part 260 through Part 265). Students that successfully complete this course receive a certificate of completion.

ENV126
HAZWOPER-MODERATE RISK 2 2
An internet-based course that provides 24 hours of interactive training online for those needing Moderate Risk certification (29 CFR Part 1910.120). The course consists of an online text, interactive exercises, Web links, self-grading quizzes and final exam. This is a 100% Web-based course.

ENV127
WATER CERTIFICATION EXAM PREP II 2 2
In this course students will review materials that may appear on the Operator Certification Examination administered by the Ohio EPA for Class I, II and III Water Operators. Students will meet with an instructor twice a week for two hours each meeting over an eight week period to review material that might appear on the certification examination prior to administration of the certification examinations.

ENV128
WASTEWATER CERTIFICATION EXAM PREP 2 2
In this course students will review materials that may appear on the Operator Certification Examination administered by the Ohio EPA for Class I, II and III Wastewater Operators. Students will meet with an instructor twice a week for two hours each meeting over an eight week period to review material that might appear on the certification examination prior to administration of the certification examinations.

Credit Hours | Contact Hours

ENV129
WATER/WASTEWATER-PERMITS AND ADMIN 1 1
Students will become more familiar with safety issues and responsibilities associated with the permitting and certification process as it relates to water and wastewater treatment plant operations. They will also have the opportunity to improve their people skills and operations management techniques as they relate to water and wastewater treatment plant operations. This is a 100% Web-based course.

ENV130
WATER/WASTEWATER-PUMPS, MAINT 3 3
Using the internet, students will cover a very broad range of topics including centrifugal pumps, selection and replacement of packing, seals, hydraulics, operating conditions, preventive maintenance, motors, plans and specifications, hazard types, plant equipment and procedures, lab safety and fire prevention and hazard communications. This is a 100% Web-based course.

ENV131
WASTEWATER TREATMENT I 4 4
Using the internet, students will explore the rudiments of wastewater treatment. This introductory course includes instruction in water pollution control, preliminary and primary treatment, fixed film processes and suspended growth systems. Along with reading assignments from the text, the course is enhanced with up-to-date photographs, audio, interactive exercises and online links. This is a 100% Web-based course.

ENV132
WASTEWATER TREATMENT II 4 4
Using the internet, students will focus on issues of concern to wastewater treatment facilities. The topics of this course include activated sludge process control, sludge digestion and solids handling, nitrogen and phosphorus removal and odor control. Along with reading assignments from the text, the course is augmented with audio, photographs, interactive exercises and online tasks. This is a 100% Web-based course.

ENV133
WASTEWATER TREATMENT-INDUSTRIAL 4 4
Using the internet, students will focus on issues of concern to industrial wastewater treatment facilities. The topics of this course include regulatory requirements; flow measurement; preliminary, physical and chemical treatment; filtration; and treatment of metal streams. Along with reading assignments from the text, the course is augmented with audio, photographs, interactive exercises, and onlinks. This is a 100% Web-based course.

ENV134
WASTEWATER COLLECTION SYSTEMS 4 4
Using the internet, students will gain a working knowledge of wastewater collection systems safety procedures, sewer inspection and testing, pipeline cleaning and maintenance, underground repair, lift stations, equipment maintenance, and sewer rehabilitation. Along with reading assignments from the text, the course is enhanced with up-to-date photographs, audio, interactive exercises, and links. This is a 100% Web-based course.

ENV135
WASTEWATER ANALYSIS 3 3
Using the internet, students will be introduced to basic laboratory safety and gravimetric, spectrophotometric, electrochemical, titrimetric, and microbiological methods. The units include instruction on the laboratory procedures for microscopic, coliform, BOD5, COD, ammonia, grease and oil, chlorine and solids analysis. Along with reading assignments from the text, the course is enhanced with up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV136
WATER TREATMENT I 4 4
Using the internet, students will explore the rudiments of water treatment. The topics of this course include regulatory monitoring, iron and maganese removal, filtration, coagulation, flocculation, and disinfection. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and onlink. This is a 100% Web-based course.

Credit Hours | Contact Hours

ENV137
WATER TREATMENT II 4 4
Using the internet, students will focus on issues of concern to surface water treatment facilities. The topics of this course include reservoir management, taste and odor control, corrosion management, softening, demineralization, and trihalomethanes. Instrumentation and sludge handling and disposal issues are also addressed. Along with reading assignments from the text, the course is augmented with audio, photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV138
WATER DISTRIBUTION SYSTEMS 4 4
Using the internet, students will obtain a working knowledge of potable water distribution systems. The topics of this course include water storage facilities, operation and maintenance of water mains, water quality issues, disinfection, and safety. This is a 100% Web-based course.

ENV139
WATER ANALYSIS 3 3
Using the internet, students will be introduced to basic laboratory safety and gravimetric, spectrophotometric, electrochemical, titrimetric and microbiological methods. The units include instruction on the procedures for regulatory sampling and safety, and specific analytical procedures for total residue, fluoride, pH, ammonia, acidity, aklalinity, calcium, chloride, hardness, and coliform analysis. This is a 100% Web-based course.

ENV140
WATER/WASTEWATER-COAGULATION/ FLOCCULATION 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with coagulation and flocculation. Along with reading assignments from the text, the course is enhanced with audit, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV141
WATER/WASTEWATER-DISINFECTION 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with a variety of disinfection processes. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This a 100% Web-based course.

ENV142
WATER/WASTEWATER-FILTRATION 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with the filtration processes. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV143
WATER/WASTEWATER-FLUORIDATION 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with the fluoridation processes. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV144
WATER/WASTEWATER-IRON & MANGANES 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with iron and manganese levels. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

Credit Hours | Contact Hours

ENV145
BASIC WATER TREATMENT-QUALITY 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when insuring the quality of the water. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV146
BASIC WATER TREATMENT-SEDIMENTATION 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include general issues operators face when dealing with sedimentation basins. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV147
BASIC WATER TREATMENT-WATER SOURCE 1 1
Using the internet, students will explore the rudiments of water treatment. The topics of this course include an overview of water treatment and reservoirs management. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV148
WATER DISTRIBUTION SYS-DISTRIB FACILITIES 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topics of this course involve the issues of water distribution systems and facilities. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV149
WATER DISTRIBUTION SYS-STORAGE SYS 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water storage facilities. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV150
WATER DISTRIBUTION SYS-SYS DISINFECTION 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water disinfection systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV151
WATER DISTRIBUTION SYS-SYSTEM O&M 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of the needs for proper operations and maintenance of water distribution systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV152
WATER DISTRIBUTION SYS-SYS SAFETY 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of safety issues confronting water distribution systems. Along with reading assignments from the text, the courses is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

Credit Hours | Contact Hours

ENV153
WATER DISTRIBUTION SYS-VALVES, MAIN & ME 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topics of this course are that of proper maintenance operations of the values, and meters found in water distribution systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV154
WATER DISTRIBUTION SYS-WATER MAINS 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water mains for distribution systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV155
WATER DISTRIBUTION SYS-WATER QUALITY 1 1
Using the internet, students will obtain a working knowledge of potable water distribution systems. The specific topic of this course is that of water quality for distribution systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV156
WASTEWATER TREATMENT-DISINFECTION AND CHLORINATION 1 1
Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues operators face when disinfecting wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV157
WASTEWATER TREATMENT-FIXED FILM PR 1 1
Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding the trickling filter process when treating wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV158
WASTEWATER TREATMENT-POLLUTION CONTROL 1 1
Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding what is meant by the term water pollution, the steps needed to treat it and the math used. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV159
WASTEWATER TREATMENT-POND SYSTEMS 1 1
Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding use of wastewater ponds as a treatment method. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV160
WASTEWATER TREATMENT-PRELIMINARY TREATMENT 1 1
Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding the steps in preliminary treatment of wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

Credit Hours | Contact Hours

ENV161
WASTEWATER TREATMENT-PRIMARY TREATMENT 1 1
Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding the steps in primary treatment of wastewater. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV162
WASTEWATER TREATMENT-SUSP GRTH SYS 1 1
Using the internet, students will explore the rudiments of wastewater treatment. The topics of this course include general issues regarding suspended growth systems. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises, and online links. This is a 100% Web-based course.

ENV163
WATER/WASTEWATER MATH & CHEM 2 2
In this course, students will be introduced to math and chemistry concepts used in water and/or wastewater plant operations. This is for a credit course that can be taken by water and/or wastewater plant operators planning to take a certification exam or seeking post-certification contact hours. This is a half-semester course with two 2-hour classes each week for eight weeks.

ENV221
OSHA - 40 HOUR - HAZWOPER 2 3
This course satisfies the requirements of OSHA Standard 1910.120. It is a health and safety training course required for all personnel who may work at a hazardous waste site. Topics to be covered include: hazardous materials chemistry, toxicology, air purifying respirators, self-contained breathing apparatus, protective clothing, site decontamination and response incidents. Safety certificate is awarded upon completion of this course.

ENV222
INDUST PROCES & POLUTION CNTRL 3 4
Pre-Req: CHM121 or CHM141, MTH121
This course introduces the students to environmental control systems and practical applications of their operation and maintenance. Particular attention given to piping and instrumentation diagrams, the reading of strip charts, continuous emission monitors, stack and source sampling and volumetric measurement of fluids. General troubleshooting techniques are also be covered.

ENV223
BASIC GEOLOGY/HYDROLOGY 3 4
Pre-Req: MTH121
This course will cover the basic components of the earth, and will include a study of its interior, minerals, rock structure, weathering and mass movement. Basic soil properties, testing, and topographic maps will be studied. The properties and flow patterns of water in both surface and subsurface conditions will be considered with emphasis placed on how hazardous materials are spread from a contaminated site.

ENV224
AIR SAMPLING-ANA & CONTR 3 4
Pre-Req: CHM121 or CHM141, MTH222
This course will review the standard methods of air sampling for gases and particulate matter. Students will learn proper monitoring equipment selection, operation and maintenance. Laboratory experience will emphasize sampling techniques, data collection and proper reporting methods. A broad overview of all aspects of air pollution will be included.

ENV225
SOLID & HAZ WASTE SMPLG 3 4
Pre-Req: CHM121 or CHM141, ENV121, ENV221, MTH222
This course will cover the methods and procedures of managing solid and hazardous wastes according to applicable federal regulations such as the Resource Conservation and Recovery Act. Included will be the study of physical facilities and operational standards of sites that treat, store and dispose of solid and hazardous wastes. Case studies will be used to determine the methodologies of waste stream audits, pollution prevention, permitting and land ban determination.

ENV226
WATER SAMPLING,ANAL,CONT 3 4
Pre-Req: CHM121 or CHM141, ENV223, MTH222
This course will cover water sampling techniques and chemical analysis of water quality. Included will be methods of measurement, techniques for sampling and required field instrumentation. Laboratory analysis, date interpretation and proper reporting methods will be developed.

ENV228
HEALTH AND SAFETY 3 4
Pre-Req: ENV121
This course helps students develop an understanding of site occupational health and safety programs including: good industrial and construction workplace practices, ergonomics, chemical toxicology, respiratory protection, personal protective equipment, record keeping, industrial hygiene sampling, ventilation measurements, machine guarding methods and accident prevention.

ENV230
OSHA 8-HOUR HAZWOPER REFRESHER 1 1
This course is required by OSHA regulation as an annual refresher for the materials covered in the OSHA 40-hour HAZWOPER class. Material to be reviewed include: hazardous material chemistry, toxicology, respiratory protection, protective clothing, site decontamination and response to incidents. A certificate is awarded upon completion of this course.

ENV231
OSHA 30-HOUR GENERAL INDUSTRY 2 3
This course is designed to develop an understanding of site occupational health and safety programs. This 30-hour comprehensive course is ideal for anyone with safety and health responsibilities and for employee safety and health awareness. This course covers all the topics in the OSHA 10-hour General Industry course plus additional OSHA approved topics. Participants who attend the required time and pass a final examination receives a certificate of completion.

ENV236
ENV HLTH & SAFETY SPEC PROJECT 3 4
Pre-Req: ECA122, ENV121, ENV221
This course is designed to allow the student to exercise the capabilities developed in other courses within the environmental areas. Special current topics important to the environmental or safety field are also incorporated into this class. Students will choose approved projects compatible with their interest and background. An environmental problem will be studied and all regulations that affect the problem are researched, and a plan of action for compliance, abatement and/or remediation will be developed.

Electrical Maintenance Technology

EST129
SWITCHGEAR, TRANS, CONTROLS 2 3
Pre-Req: EET120
The course covers low and high voltage circuit breakers and switchgear primarily from 4KV to 15KV. It shows how switchgear is basically constructed, how circuit breakers work, and general maintenance of such equipment. The basic theory of transformers and connection schemes of common types of transformers including dry and wet type distribution transformers, power transformers, and instrument transformers is explained. Control ladder and wiring diagrams, with an introduction to input and output control devices, are presented and implemented in lab.

Credit Hours | Contact Hours

EST130
ELECTRICAL CIRCUITS/DEV 4 5
Pre-Req: MTH101 or MTH121 or MTH103
This course is to provide a general understanding of electricity and the operation of electrical devices; to be able to make electrical measurements and basic calculations involving voltage, current, resistance, reactance, capacitance, and power; and to learn how to supply power to commercial equipment.

EST132
FUNDAMENTAL OF ELECTRICITY 4 5
Pre-Req: MTH101 or MTH103
This course consists of analytical and laboratory techniques with heavy emphasis on resistive and reactive DC & AC electrical circuits, as well as the principles of electronic devices, including diodes and transistors.

EST133
DIGITAL LOGIC FUNDAMENTALS 4 5
Pre-Req: EST132
This course covers the fundamentals of digital logic circuits. Topics include number systems, logic gates, Boolean algebra, logic simplication, karnaugh maps, adders, multipliers, multiplexers and decoders. Elementary digital circuits including flip-flops, counters, shift registers, memory devices, programmable logic devices and integrated circuits are also covered.

EST134
PROGRAMMABLE CONTROLLER FNDMTL 4 5
Pre-Req: EST133
A study of programmable controllers emphasizing program development, logic development and troubleshooting. Emphasis on relays, timers, counters, integer math and scan-dependent programming. Factory floor control concepts are stressed.

EST221
ELECTRONIC TBLSHOOTING 3 4
Pre-Req: EET123
Course covers: principles of troubleshooting with electronic/ electrical testing instruments, troubleshooting electric motors and generators, industrial controls, residential and industrial wiring, power supply repair, signal tracing, "in-circuit" semi-conductor testing and pulse circuit troubleshooting.

Engineering Technology Special Courses

ETD121
ENGINEERING TECHNOLOGY SEMINAR 1 2
This course makes the student aware of the college, the division, and the engineering programs. This course is divided into two major segments. The first segment includes resource utilization, study and test-taking skills, learning styles, goal setting, time management, engineering speakers, career services, advising, changing majors, scheduling, interpersonal skills, and communication skills. The second segment emphasizes basic engineering and math skills and includes properties of right triangles, basic trigonometric functions, basic linear equations, use of calculators, unit conversation, fractions, geometry and technical report writing.

ETD201
ENG INDEPENDENT STUDY 1 10
An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

ETD202
ENG INDEPENDENT STUDY 2 20
An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

Credit Hours | Contact Hours

ETD203
ENG INDEPENDENT STUDY 3 30
An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

ETD204
ENG INDEPENDENT STUDY 4 40
An independent study may be arranged through the Engineering Technology Division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Engineering Technology will determine course content, meeting schedules and credit hours.

ETD222
ENGINEERING CO-OP 2 20
Co-op opportunities are available to students enrolled in Engineering Technologies. Students may contact their faculty advisors or Career Services for more information.

ETD223
ENGINEERING CO-OP 3 30
Co-op opportunities are available to students enrolled in Engineering Technologies. Students may contact their faculty advisors or Career Services for more information.

ETD224
ENGINEERING CO-OP 4 40
Co-op opportunities are available to students enrolled in Engineering Technologies. Students may contact their faculty advisors or Career Services for more information.

Electrical Power Utility

EUT121
OVERHEAD LINE TECHNOLOGY I 6 10
Provides the knowledge and skill to perform work on secondary voltage circuits; understanding of the techniques used to install transmission support systems, transformers and install anchors safely and efficiently with concentration on the installation of services, street lighting and secondary circuits. Included are advanced training pertaining to the various transmission support system framing techniques and guying methods. An overview of transmission and distribution of electrical systems, Occupational Safety and Health Administration (OSHA) and rigging safety awareness requirements will be included in this course.

EUT122
OVERHEAD LINE TECHNOLOGY II 6 10
Pre-Req: EUT121
Provides the knowledge to safely and properly install three phase primary conductors; to operate transmission line installation equipment; to safely install and operate line fuses, reclosers, transformer power banks, capacitors and line voltage regulators; to identify, install and maintain underground residential distribution secondary equipment. The safe and proper methods to install box pads, single-phase transformers, primary elbows and terminators, and safety requirements will be included throughout the course of instruction.

EUT123
SUBSTATION TECHNOLOGY I 6 10
Provides the knowledge and skills to perform maintenance in electrical substation and switchyards; understand and apply the proper techniques to operate power, power and hydraulic actuated tools, as applied to conduit forming and cable tray layouts. Included is advanced training in the operation of substation ground maintenance vehicles; rigging and construction of substation and switchyard facilities. Occupational Safety and Health Administration (OSHA) and rigging safety awareness requirements will be included in this course.

EUT124
SUBSTATION TECHNOLOGY II **6** **10**
Provides the knowledge and skill to safely perform maintenance in electrical substation and switchyards; understand and apply the proper cable pulling/bus work techniques; installation of substation conductors/wire, switches and grounding techniques. Included is advanced electrical skills training, as applicable to the use and installation of batteries, fuses, transformers, regulators/reclosers, circuit breakers, and capacitors within the substation. The proper lockout/tagout techniques and principle will be included in this course.

EUT221
OVERHEAD LINE TECHNOLOGY III **6** **10**
Pre-Req: EUT122
Provides the knowledge and skill to identify, install and maintain primary underground residential distribution (URD) equipment; knowledge pertaining to the different styles of sub-transmission support structures, with instruction on the techniques and proper use of hot-line tools to work sub-transmission & distribution structures when laying out conductors and changing various insulators; knowledge and skill to safely perform rubber gloving assignments using the insulate and isolate techniques. Various methods of troubleshooting URD primary and secondary circuits are discussed and demonstrated. Students will perform various tasks, while working on an energized three-phase circuit under controlled conditions. Applicable safety requirements will be taught and stressed throughout the course of instruction.

EUT222
OVERHEAD LINE TECHNOLOGY IV **7** **12**
Pre-Req: EUT221
Provides the skills to safely climb transmission support towers and H-structures to achieve the qualified status. Upon qualification, the student will obtain the basic skills to perform intermediate tasks while aloft on these pertinent structures. The student will gain an understanding of substation equipment and one line drawings. Emphasis will be placed on recognizing energized equipment, minimum approach distances and substation safety. At the conclusion of the course, the student will be qualified to enter a substation. Included in this course of instruction are: Lockout/Tagout, Master Drive, Topical Safety, Comprehensive Skills Review and a Safety Fair.

EUT224
SUBSTATION TECHNOLOGY III **6** **10**
Pre-Req: EUT124
The outcome of this intermediate course is electrical skills training, as applicable to the use and installation/maintenance of batteries, fuses, transformers, regulators according to Substation Preferred Practices. It also provides the knowledge and skill to safely perform maintenance in electrical substation and switchyards; understand and apply the proper cable pulling/bus work techniques; installation of substation conductors/wire, switches and grounding techniques. An in-depth study and practice of lockout-tagout procedures is applied. The daily maintenance procedures are honed for substation power transformers; such as TTR testing, TCG/O2 testing, oil dielectric testing DGA sampling according to Substation Practices. Battery Impedance Testing is also included in this course.

EUT225
SUBSTATION TECHNOLOGY IV **7** **12**
This course provides advanced knowledge and skills to safely perform high level-maintenance in electrical substation and switchyards; understand and apply the proper cable pulling/bus work techniques; installation of substation conductors/wire, switches and grounding techniques. Included are advanced electrical skills training, as applicable to the use and installation of batteries, fuses, transformers, regulators/reclosers, circuit breakers, and capacitors within-depth study of Fault/Load Interrupting equipment is accomplished. Complete inspection of Oil Circuit Breakers; which includes, Circuit Profilers training, Circuit Breaker control schemes, Circuit Breaker Time Travel Characteristics and Analysis. All above mentioned functions are performed according to the Substation Preferred.

Credit Hours | Contact Hours

Finance

FIN123
FUND FINANCIAL SERVICES **4** **4**
Pre-Req: IDS102, BUS123
This course introduces the student to the discipline of personal financial planning and to the various services which support the planning process. The tools and techniques of those services are addressed from two perspectives: (1) a professional occupation and (2) an individual developing and implementing their own long-range plan. Specific topics include understanding the financial planning process, ethical and professional considerations in financial services, and introductions to the fundamentals of credit, insurance, investments, and retirement and estate planning. Upon successful completion of this course, the student should understand the fundamental concepts of personal financial planning.

FIN220
PRINCIPLES OF FINANCE **4** **4**
Pre-Req: ACC127, ACC132
This is an exit-level course designed for Account and Finance majors. Topics include management and analysis of short and long-term assets and equities, their costs and their utilization in optimal corporate financial structures. Upon completion of this course, the student should be able to estimate a firm's cost of capital and discuss the risks and costs associated with the various forms of financing in a corporate setting.

FIN221
INVESTMENT & SECURITIES **4** **4**
Pre-Req: ACC122 or ACC132
This course is designed to provide the student with a clear understanding of the investment environment including the basics of investing ranging from descriptive material to the theory of portfolio construction and efficient markets. It includes the appraisal of the vast options for investors, the concept of risk, information sources and provides insight into the topic of security analysis. An investment simulation in a portfolio of securities allows the student to experience "hands-on" investing as they progress throughout this course. Upon completion, the student should be able to research stocks, make trades and review and analyze their account activities.

FIN222
RETIREMENT PLAN/EMPLOYEE **3** **4**
Pre-Req: ACC122 or ACC132
This course studies the fundamentals of employee benefits (including pensions and deferred compensation, group life and health insurance, Social Security, Medicare, and other fringe benefits) and the basics of the retirement planning process. Upon successful completion of this course, the student should understand the fundamental tools and techniques used in retirement and fringe benefit plans.

FIN223
ESTATE & INCOME TAX PLAN **3** **4**
Pre-Req: ACC124
This course studies income tax planning, fundamentals of estate planning, estate planning considerations and constraints, and tools and techniques for estate planning. Topics include: the estate planning process, forms of property ownership, property transfers, characteristics of wills, intestacy, the fundamentals of estate and gift taxes (including determining the gross estate), the probate process, the use of trusts and estate liquidity. Upon successful completion of this course, the student should understand the fundamentals of the estate planning process.

FIN224
RISK MANAGEMENT **3** **4**
Pre-Req: FIN123
This course is designed to provide the students with a clear understanding and insight of insurance programs available to individuals, families and organizations as a safeguard against financial liabilities in case of accidents, prolonged illness and for loss due to natural catastrophes and disasters. Upon completion, students should be able to select the most appropriate insurance program for themselves and their families.

Credit Hours | Contact Hours

FIN225
FIN SERVICES CASES/PRACT 3 4
Pre-Req: FIN221, FIN224
Co-Req: FIN223, FIN222
This course provides practical experience in six areas of financial services (fundamentals of financial planning, insurance, investments, income tax planning, retirement planning and employee benefits, and estate planning). Upon successful completion of this course, the student should be able to apply the fundamental tools and techniques of financial services to various realistic problems and cases.

FIN226
CURRENT FIN SERVICE TOPICS I 3 3
Pre-Req: FIN123, FIN221
This course addresses current topics covered in the Services VI examination. This course provides students with a clear understanding and insight of the financial markets, investment risks and policies. It is also intended to familiarize the students with investment companies, taxation and customer accounts, variable contracts, retirement planning and securities including regulation. Upon completion of this course, students should be prepared to sit for the Series VI examination.

Fire Services

FST128
FIREFIGHTER 1A 36-HOUR 2 3
This is the Firefighter 1A, 36-hour, Volunteer course. This course provides the training, knowledge, and skills required to become a state certified firefighter trained to be Volunteer Firefighter level. Upon completion of this course the student must pass a State of Ohio test to become certified. This course can be used as the first step in a three step process in becoming a full-time professional firefighter trained to the Firefighter I & II level.

FST129
FIREFIGHTER 1C-1 120-HOUR 5 8
This is the Firefighter 1C-1, Level I 120-hour course. This course provides the training, knowledge, and skills required to become a state certified firefighter trained to the Firefighter I level. Upon completion of this course the student must pass a State of Ohio test to become certified. This course can be used as the first step in a two step process in becoming a full-time professional firefighter trained to the Firefighter I and II level.

FST224
LEGAL ASPECTS OF FIRE SERV 2 2
The focus of this course is on the legal rights, duties, liability concerns and responsibilities of the fire department while carrying out its function. Courtroom presentations, procedures and case studies will be included.

FST225
HAZARDOUS MATERIALS 3 3
In-depth study of chemical characteristics and reactions related to the storage, transportation, and handling of hazardous materials such as flammable liquids, combustible solids, oxidizing and corrosive materials, and radioactive compounds. Emphasis will be placed on emergency situations, firefighting and control. The study of health hazards will also be included.

FST226
LINE OFFICER LEADERSHIP 3 3
Broad management theory and application of basic strategy and tactics for company officers is the focus of this course.

FST228
FIREFIGHTER LEVEL I AND II 240 HOUR 10 16
This course provides the training, knowledge, and skills required to become a state certified firefighter. Training includes fire behavior incident systems, building construction, personal protective equipment, rescue and extrication, ground ladders, fire cause determination and fire tactics. The students will become proficient through lecture and hands-on experience using up to date, realistic tools and equipment. Successful completion of this course is required to take the state firefighter's test.

Credit Hours | Contact Hours

FST229
FIREFIGHTER IB 84-HOUR 3 5
Pre-Req: FST128
This is the Firefighter IB, 84-hour transition course. This course provides the training, knowledge, and skills required to become a state certified firefighter trained to the Firefighter I level. Upon completion of this course the student must pass a State of Ohio test to become certified. This course can be used as a second step in a three step process in becoming a full-time professional firefighter trained to the Firefighter I and II level.

FST230
FIREFIGHTER IC-2 120-HOUR 5 8
Pre-Req: FST 129 or FST128, FST229
This is the Firefighter IC-2, Level II 120-hour course. This course provides the training, knowledge and skills required to become a state certified firefighter trained to the Firefighter II level. Upon completion of this course the student must pass a State of Ohio test to become certified. This course can be used as the final step in a two step process in becoming a full-time professional firefighter trained to the Firefighter I and II level or as a Final step in the three step process in becoming a full-time professional firefighter trained to the Firefighter I and II level.

General Studies Special Courses

GSD201
GEN INDEPENDENT STUDY 1 10
An independent study may be arranged through the general studies/public service technologies division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for general studies/public service technologies will determine course content, meeting schedules and credit hours.

GSD202
GEN INDEPENDENT STUDY 2 20
An independent study may be arranged through the general studies/public service technologies division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for general studies/public service technologies will determine course content, meeting schedules and credit hours.

GSD203
GEN INDEPENDENT STUDY 3 30
An independent study may be arranged through the general studies/public service technologies division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for general studies/public service technologies will determine course content, meeting schedules and credit hours.

GSD204
GEN INDEPENDENT STUDY 4 40
An independent study may be arranged through the general studies/public service technologies division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for general studies/public service technologies will determine course content, meeting schedules and credit hours.

GSD221
SPECIAL TOPICS 1 1
Special topics in general studies division. Repeat registration permitted.

GSD222
SPECIAL TOPICS 2 2
Special topics in general studies division. Repeat registration permitted.

GSD223
SPECIAL TOPICS 3 3
Special topics in general studies division. Repeat registration permitted.

Credit Hours | Contact Hours

GSD224
SPECIAL TOPICS 4 4
Special topics in general studies division. Repeat registration permitted.

Health Information

HIT121
HTLH DATA MGT & DELIVERY SYSTM 4 6
The structure of health care in the United States and an outline of its providers; structure and function of the American Health Information Management Association (AHIMA); accrediting, licensing and certifying in health care; structure and functions of the medical records department; government participation in health care including prospective payment; compilation of medical information throughout the patient's course of treatment in the health care facility, culminating in a complete health record filed in the medical record department; computerized and manual physicians' record-keeping systems; numbering and filing systems; master patient index; record retention; and storage.

HIT122
ALTERNATIVE HLTH RECS & REGIST 3 4
Pre-Req: HIT121
Structure and function of non-acute care facilities; the medical record professional's function in such facilities; development of ancillary health records; accrediting, licensing and surveying requirements; and trends related to ancillary health facilities. Overview of health registries with emphasis on cancer registry. Students will be spending observation time in the medical record department of an ancillary care facility.

HIT123
HEALTHCARE LEGAL AND ETHICAL ISS 2 2
Co-Req: HIT121
Legal aspects of medical record practice; overview of judicial system and processes; importance of medical record as a legal document and the effect of confidentiality on release of medical information; practice in the release of information function; record retention and destruction of records are studied; current legal issues, ethics and laws are discussed.

HIT124
CLINICAL CLASSIFICATNS SYS I 4 6
Pre-Req: HIT121, BIO122 or BIO123
Co-Req: BIO124
Structure of the ICD-9-CM coding system and its application; practice in coding diagnoses and procedures; study of various nomenclature and classification systems used in the health care field.

HIT221
CLINICAL CLASSIFICATNS SYS II 3 4
Pre-Req: BIO222
Co-Req: HIT124
In-depth study of CPT-4/HCPCS coding system and its applications: ambulatory care coding; practice in coding ICD-9-CM diagnoses and CPT-4 procedures.

HIT222
HEALTHCARE STATISTICS & RESEARCH 3 4
Pre-Req: HIT122, HIT124, HIT224
Vital and public health statistics relating to health record practice; health care facility statistics and statistical reports, including sources and uses of data; data retrieval of clinical information; data display; indexes and registers; abstracting of health information.

HIT223
HIM SUPERVSN:CONCEPTS & PRACT 3 3
Pre-Req: HIT224
Co-Req: ENG224
Introduction to the principles of management and the role of the supervisor in management; study of management functions, particularly as they relate to the medical records department; supervisor's role in coordinating goals of the individual, department and organization; study of practical problems in supervision.

Credit Hours | Contact Hours

HIT224
QUALITY MGT IN HEALTHCARE 2 2
Pre-Req: HIT122, HIT124
Quality assessment of both departmental functions and medical care; quality improvement as a facility-wide process; utilization review; risk management; and total quality management.

HIT226
PROFESSIONAL PR I/SEM I 4 9
Enables the student to practice technical skills in the following areas: number control; filing and retrieval of master patient index information and patient records; chart assembly and analysis; microfilming; basic ICD-9-CM and CPT-4 coding; and medicolegal and correspondence procedures.

HIT227
PROFESSIONAL PR II/SEMII 4 9
Enables the student to practice technical skills in the following areas: ICD-9-CM and CPT-4 coding and DRG assignment; abstracting; indexes, registers and data retrieval; quality assurance, utilization review and risk management. The student reviews job descriptions and job procedures from a supervisory standpoint.

HIT228
CLINICAL CLASS SYS III & REIMB 4 6
Pre-Req: HIT124
This course includes validation of coded clinical information, DRG assignment, APCs, RBRVS and case mix/severity of illness data. Reimbursement methodologies applicable to all health care settings are addressed. Topics include: practice of previously learned principles of coding systems; prospective payment issues; peer review organizations; case mix analysis and indices; third party payers; billing and insurance procedures as they relate to health information management; managed care/capitation; and data quality.

HIT229
HLTH INFO SYSTEMS AND TECH 3 4
Pre-Req: BCA120, HIT224
This course presents concepts of computer technology and the tools/techniques for using application software in the health care delivery system. Topics covered include computer concepts (hardware, software); data; information; telecommunications; networks; microcomputer applications; data integrity; image processing; data security; and health information systems.

HIT230
HLTH CARE DELIVERY IN THE US 2 2
This course focuses on the structure and process of health care in the United States. Topics include the historical development of the health care delivery system; types of facilities, services, agencies and personnel that constitute the system, critical policy and regulatory issues the system confronts; health care financing and reimbursement; and the role of government in health care.

HIT231
CODING PROF PRACTICE EXP/SEMIN 2 6
Pre-Req: HIT124
The Student is placed in a health care setting for supervised coding experience. This enables the student to apply technical skills in ICD-9-CM and CPT coding, APC and DRG assignment and other reimbursement methodologies.

Health Technology Special Courses

HTD201
HLTH INDEP STUDY 1 10
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for Health Technology will determine course content, meeting schedules and credit hours.

	Credit Hours	Contact Hours

HTD202
HLTH INDEP STUDY **2** **20**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD203
HLTH INDEP STUDY **3** **30**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD204
HLTH INDEP STUDY **4** **40**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD205
HLTH INDEP STUDY-PHY THERAPY **1** **10**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD206
HLTH INDEP STUDY-PHY THERAPY **2** **20**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD207
HLTH INDEP STUDY-PHY THERAPY **3** **30**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD208
HLTH INDEP STUDY-PHY THERAPY **4** **40**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD209
HLTH INDEP STUDY-OCC THERAPY **1** **10**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD210
HLTH INDEP STUDY-OCC THERAPY **2** **20**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD211
HLTH INDEP STUDY-OCC THERAPY **3** **30**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

	Credit Hours	Contact Hours

HTD212
HLTH INDEP STUDY-OCC THERAPY **4** **40**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD213
HLTH INDEP STUDY-MED LAB **1** **10**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD214
HLTH INDEP STUDY-MED LAB **2** **20**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD215
HLTH INDEP STUDY-MED LAB **3** **30**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD216
HLTH INDEP STUDY-MED LAB **4** **40**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD217
HLTH INDEP STUDY-MED ASSTG **1** **10**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD218
HLTH INDEP STUDY-MED ASSTG **2** **20**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD219
HLTH INDEP STUDY-MED ASSTG **3** **30**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD220
HLTH INDEP STUDY-MED ASSTG **4** **40**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD221
HLTH INDEP STUDY-DENTL HYGIENE **1** **10**
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

Credit Hours | Contact Hours

HTD222
HLTH INDEP STUDY-DENTL HYGIENE 2 20
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD223
HLTH INDEP STUDY-DENTL HYGIENE 3 30
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD224
HLTH INDEP STUDY-DENTL HYGIENE 4 40
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD225
HLTH INDEP STUDY-HEALTH INFO 1 10
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD226
HLTH INDEP STUDY-HEALTH INFO 2 20
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD227
HLTH INDEP STUDY-HEALTH INFO 3 30
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD228
HLTH INDEP STUDY-HEALTH INFO 4 40
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD229
HLTH INDEP STUDY-MASSAGE 1 10
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD230
HLTH INDEP STUDY-MASSAGE 2 20
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD231
HLTH INDEP STUDY-MASSAGE 3 30
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

Credit Hours | Contact Hours

HTD232
HLTH INDEP STUDY-MASSAGE 4 40
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD233
HLTH INDEP STUDY-RESPIRATORY 1 10
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD234
HLTH INDEP STUDY-RESPIRATORY 2 20
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD235
HLTH INDEP STUDY-RESPIRATORY 3 30
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

HTD236
HLTH INDEP STUDY-RESPIRATORY 4 40
An independent study may be arranged through the health technology division to satisfy student needs that cannot be satisfied through scheduled courses. The student, faculty advisor and dean for health technology will determine course content, meeting schedules and credit hours.

Heating, Ventilation and Air Conditioning

HVC121
HVAC PRINCIPLES I 3 4
Overview of heating, ventilating, and air conditioning, including basic design, equipment characteristics, venting, the refrigeration cycle, system control, basic heat transfer, basic airflow principles, air quality, product quality and comfort principles.

HVC122
HVAC PRINCIPLES II 3 4
Pre-Req: HVC12
1An in depth study of the main principles of HVAC. Beginning with safety, topics covered include piping, refrigeration piping, the refrigerant cycle, and refrigerant handling. Also studied are duct sizing and layout, air test and balance, including blower drives and system components. Heating and cooling loads will be discussed. Special attention will be given to electrical wiring and controls and troubleshooting.

HVC123
SHEET METAL LAYOUT I 3 4
This course covers layout and forming of basic sheet metal fittings using drawing equipment and construction paper. Topics include square/round ductwork, tapers, transitions and offsets.

HVC124
MOBILE CAB CLIMATE CNTL SYS/AP 2 3
This course will provide the student with a comprehensive understanding of the safe installation, start-up, service, and field repair of the MacBone Industries LtTd. Mobile Heating/AC Unit. The refrigeration cycle and leak detection/repair will be covered: including brazing, evacuation, and charging. At course conclusion of this course the mobile (Automotive) EPA refrigerant handling testing and certification will be conducted.

Credit Hours | Contact Hours

HVC221
HVAC FURNACE COMBUSTION PRINCIPLES 2 2
The National Fuel Gas Code (NFPA54) will be used as the basis for this course of study. Subjects covered will include appliance venting and vent sizing, combustion air requirements and sizing, mechanical room configuration and equipment location. Published manufacturer installation procedures will be a significant part of this course.

HVC222
HVAC DESIGN & APPLICATION 3 4
Pre-Req: HVC122
The student's understanding of heat transfer will be expanded to encompass application. The principles of thermodynamics, psychometrics, and calculating heating and cooling loads are emphasized. Heating, venting and combustion air will be included. Reading plans and specification, systems design, and equipment selection are studied.

HVC223
HVAC SYS OPER & TRBLSHT- HEAT 3 4
Pre-Req: HVC122
Heating equipment and system operation and studied together with development of problem solving techniques. Through the use of laboratory demonstrations, measurements, observations and experiments with HVAC systems and components the student learns proper system diagnosis and repair procedures.

HVC224
HVAC SYS OP & TRBLSHT- COOLING 3 4
Pre-Req: HVC122
Cooling equipment and systems operation are studied together with development of problem solving techniques. Through the use of laboratory demonstrations, measurements, observations and experiments with HVAC systems and components, the student learns proper system diagnosis and repair procedures.

HVC226
SHEET METAL LAYOUT II 3 4
Pre-Req: MST132 or HVC123
Covers layout, forming and fabrication of basic sheet metal ductwork fittings and use of equipment to accomplish these tasks. Topics include: the fabrication of square/round sheet metal ductwork, tapers, transitions, and offsets; the development of geometrical elements of structures, their intersections by the radial line, and triangulation methods of sheet metal layout.

HVC227
HVAC FIELD INSTALL TECH & PROC 4 5
Co-Req: HVC122
Laboratory intensive introduction to air conditioning system field installation techniques and procedures.

HVC228
HVAC SYS AIRFLOW & DUCT SIZING 1 1
Pre-Req: MTH101
A detailed examination of air and its properties and HVAC system airflow principles along with duct sizing are presented. As a final project, a properly sized duct system is designed given equipment performance data.

HVC229
AIR CONDITNING REFRIG CYCLE 1 1
The refrigeration cycle is presented together with the operation of compressors and metering devices. Equipment studied includes residential air conditioning and heat pumps, their principles of operation, their components and auxiliary devices, and performance ratings.

HVC230
HVAC RESIDENTIAL EQUIP SIZING 1 1
This course provides the HVAC student with a powerful, efficient, and highly accurate method of load estimating and duct selection. The software covered in this course simplifies a very complex and time-consuming task of manually calculating the estimated load with the Right J software package. Outside classwork may be assigned.

Credit Hours | Contact Hours

HVC231
HVAC MOTORS AND COMPRESSORS 1 1
Motors and compressor types, designs, applications, and failure modes are studied. Heavy emphasis is placed on failure symptoms, causes and resolution. Actual failed motors and compressors are examined and probable causes and remedies determined.

HVC232
ADVANCED HVAC APP & CONTROLS 3 4
Pre-Req: HVC222, HVC227
HVAC equipment application design concentrating on commercial and light commercial systems is presented. Roof-top units, economizers, water chillers, air handling units and IAQ are covered. Commercial system controls and zone controls including residential zoning are studied.

HVC233
HVAC BID SPECIFICATION 3 4
Pre-Req: HVC222
This course of study will make use of actual historic construction industry plans and specifications. The student will be taken through the entire estimation process including work and technical specification reading and comprehension, acquisition of bids and calculation of pricing, preparation of the bid, formatting the bid according to specifications and accepted standards and delivery of a comprehensive bid quotation. Labor rates, available workforce, travel time, completion dates, subcontracts, bonds, accepted alternates, project value and how these items affect the delivered quotation will be introduced during the class exercises.

HVC234
HVAC ELECTRICAL SYS & APPLIC 3 4
Pre-Req: MTH101 or MTH103
Co-Req: HVC1121
This course provides the knowledge and skills to understand and safely install, service, and troubleshoot HVAC/R electrical circuits and electronics. Basic electrical foundation fundamentals are provided. HVAC/R electricity and electronic circuits are covered in depth. A focus on proper meter usage is engrained in the process. Motors, controls, and other electrical/electronic devices are covered also. The sequence of operation and diagnostic trouble-shooting, utilizing pictorial, schematic, and hands on approaches are provided.

HVC235
REFRIGERATION 3 4
A basic understanding of mechanical refrigeration from safety to cryogenics is presented. The refrigeration cycle, components, controls, in instrumentation, installation, servicing, and troubleshooting are studied. Various components including the compressor, condenser, filter-dryer, and refrigeration controls are studied in detail

HVC236
ADV HVAC ELECTRICAL APPLIC 3 4
Pre-Req: HVC234
This course encompasses complex HVAC control circuitry schemes, including microprocessor controlled as used on large chillers, large tonnage DX, and DDC controls. The student outcome is full understanding of control functions, sequence of operation, and troubleshooting skills applicable to complex HVAC circuitry. This ensures that the student has the ability to systematically and logically troubleshoot these complex systems with efficiency and accuracy.

Interdisciplinary Studies

IDS101
TECHNICAL COMPREHENSION 3 3
Technical Comprehension helps students develop and apply reading, vocabulary, and study skills. Students identify their individual learning styles and utilize strategies to enhance their success with college level work. This course includes a computerized reading program (PLATO). Successful completion of this plus a passing score on the post-test satisfies the college reading requirement.

Credit Hours | Contact Hours

IDS102
CRITICAL ANALYSIS 3 3
Pre-Req: IDS101
Critical Analysis is an applied course emphasizing critical reading and thinking skills. It teaches strategies to enhance the analysis, understanding, synthesis, and application of information from printed material. This course includes vocabulary development and a computerized reading program (PLATO). Placement is based on score achieved on entrance placement test or satisfactory completion of IDS101, Technical Comprehension, without passing the reading post-test. Successful completion of this course satisfies the college reading requirement.

IDS110
LEADERSHIP CONCEPTS 3 3
This is the prerequisite course for any and all other Leadership Experience modules. In this course participants learn the basic skills used to effectively interact with others and exert leadership in these interactions. Practical skills include active listening, effective processing, problem solving, negotiating and empowering. This is a team taught course emphasizing experiential techniques.

IDS112
MASTER STUDENT MODULE I 1 1
Designed to aid students in gaining skills needed for constructive and efficient learning both in college and other life settings. Topics include time management, study and test-taking techniques, communication and relationship-building skills, library use, and a variety of techniques for personal use. Module I: Planning, memory, and thinking.

IDS113
MASTER STUDENT MODULE II 1 1
Designed to aid students in gaining skills needed for constructive and efficient learning both in college and other life settings. Topics include time management, study and test-taking techniques, communication and relationship-building skills, library use, and a variety of techniques for personal use. Module II: Reading, note taking, and test.

IDS114
MASTER STUDENT MODULE III 1 1
Designed to aid students in gaining skills needed for constructive and efficient learning both in college and other life settings. Topics include time management, study and test-taking techniques, communication and relationship-building skills, library use, and a variety of techniques for personal use. Module III: Communicating, Resources, Health and Diversity.

IDS115
MASTER STUDENT 3 3
Designed to aid students in gaining success skills needed for constructive and efficient learning both in college and other life settings. Topics include time management, study and test-taking skills, library use, and a variety of techniques for academic, professional and personal use.

IDS120
COMPUTER CONCEPTS 1 1
This self-paced course is designed to familiarize the beginner with the personal computer. It addresses computer literacy, the Windows operating environment, program and file management, and introduces the Internet, Web browsers, and e-mail. Placement is based on score achieved on entrance assessment tests. Proficiency of 80% constitutes passing.

IDS200
LEADERSHIP SEMINAR 3 3
This is a highly participative, experiential course that explores trust and team building, goal setting, change management, conflict resolution and transformational leadership. This seminar encourages self-exploration and growth as a major process of influence in leadership.

Credit Hours | Contact Hours

IDS201
TRUST & TEAM BUILDING 1 1
Pre-Req: IDS110
This team-taught course promotes understanding of the importance of trust and team-building to effective leadership, and provides experience with techniques used in both. This highly participative experience involves lectures, analysis of films and works of literature and group discussion. Its design increases awareness of self and others while teaching how to develop trust and build teams.

IDS202
GOAL SET/MANAGING SUCCESS 1 1
Pre-Req: IDS110
The objectives of this team-taught course are to understand the importance of setting goals to effective leadership and to practice various techniques for goal-setting. Experiential learning exercises instruct participants in both individual and group goal-setting. The course focuses on aspects of confronting failure and managing the success of any group endeavor.

IDS203
CHANGE,CONFLICT & TRANSF 1 1
Pre-Req: IDS110
This team-taught course provides an understanding of the skills necessary for promoting change management. Participation deals with the inevitability of change in dynamic individuals and organizations and focuses on the transformation processes used to evolve and improve. Conflict resolution is highlighted as a key process.

IDS204
LEADERSHIP VISION 1 1
Pre-Req: IDS110
This team-taught course emphasizes the critical leadership role of vision. Experientially-based methods train participants to integrate knowledge and skills in the process of creating both individual and organizational vision. This model involves participants in the dynamic, creative act of visioning.

IDS205
SITUATIONAL LEADERSHIP 1 1
Pre-Req: IDS110
This team-taught course provides tools for adapting leadership behavior to the dynamics of situations. Applications of contingency skills and styles are considered. This experiential course exposes the participants to the challenges facing leaders and addresses the skills needed to succeed in a variety of situations.

IDS206
LDSHP DYNAMICS:IND DEV & INFLU 3 3
Pre-Req: ENG124
This course provides opportunities for the student's development of leadership abilities through personal and interpersonal inquiry and practice. Students will identify skills central to group influence and analyze, interpret and apply those behaviors, including active listening, effective processing, problem solving, negotiating and empowering. Collaborative learning, experiential techniques and workshop formats are main features of this course.

Industrial Engineering

IET223
COMPUTER NUMERICAL CTRL 4 6
The milling section provides an introduction to part programming for the vertical axis milling machine. The lathe section provides an introduction to programming a computer-numerical controlled lathe. The CAM section provides an introduction to automated programming through the use of the computer.

IET228
INTRODUCTION TO ROBOTICS 2 2
Basic terminology, theory and application of robotics, including: selection, construction, classification, operating characteristics and safety. Emphasis is given to industrial examples in stand-alone and work cell applications.

	Credit Hours	Contact Hours

IET270
DIM METROLOGY & INSPECT I **3** **3**
Pre-Req: MTH101 or MTH103
This course provides an in-depth study of measuring principles, instruments, and techniques. The measuring instruments most commonly used in industry, including coordinate measuring machines, are covered. Emphasis is placed on proper use of equipment in terms of prevention and minimization.

Interactive Media

IMT121
INTERACTIVE MEDIA **3** **3**
Topics include communication through design, sketching and visualization, the use of computers and human-computer interaction. Human-computer interaction is explored through a survey of Web, audio, video, and design projects.

IMT122
GRAPHIC ARTS DESIGN **3** **4**
Topics include effective communication through design from thought to finished process. Upon completion students will be able to effectively use Adobe Photoshop to create computer graphics.

IMT125
3D GRAPHICS MODELING **3** **4**
Pre-Req: IMT122
Topics include 3D modeling, texturing, lighting, and rendering. Upon completion, the student will be able to effectively use the 3DsMax interface to create and render 3D objects and scenes.

IMT129
DIGITAL AUDIO RECDG & EDITING **3** **4**
Co-Req: IMT121
Course covers a wide array of digital audio topics including: analog and digital audio formats, microphone placement, mixing techniques for stereo and surround sound, sound effects, audio for video, audio Web content, the development of new audio technology and digital audio editing. Upon completion, the student will be able to create and produce audio for all visual media, CD and DVD.

IMT131
COLOR THEORY AND DESIGN **3** **4**
This course introduces the elements and principles of two-dimensional design, including the study of graphic design history, color theory and the elements and principles of design as it applies to the visual arts. Coursework will consist of lectures and discussions involving on color theory and design concepts and applications. Class assignments emphasize creative problem solving techniques with specific limitations and specifications.

IMT132
DIGTL PHOTOGRAPHY/GRAPHC & MEDIA **3** **4**
Co-Req: IMT122
This course teaches the student the principle of digital photography and digital image manipulation. Topics covered include: focus, exposure, composition and lighting. Students must provide their own digital camera for the duration of the course.

IMT133
TECHNICAL ILLUSTRATION **3** **4**
Integration of visual elements and organization of two and three-dimensional space with architectural form and function. The students use Computer-Aided Design software to create three-dimensional objects using various drawing tools such as Auto CAD and 3D Studio Max. The students will demonstrate their ability to understand the principles of design, visualization, projection, and analysis by producing a set of working computer drawings.

IMT135
THEORY AND COMPOSITION I **3** **3**
The creation of music using classical notation is the focus of this course. The student will be able to explain music theory fundamentals and its related rules. Upon completion of this course the student will be able to compose and arrange 16-32 bar songs with theoretical accuracy.

	Credit Hours	Contact Hours

IMT223
DIGITAL VIDEO RECORDING & EDIT **3** **4**
Pre-Req: IMT129 or IMT122, IMT121
This course covers the production of digital video. Studio practice will include topics such as camera operation, lighting, and digital video editing. Working independently and in groups, students work on projects including documentary, short subject narratives, and editing exercises.

IMT227
3D GRAPHICS ANIMATION **3** **4**
Pre-Req: IMT125
Building upon the stills acquired in 3D modeling, this course teaches the student the principles of animation using 3DsMax. Upon completion, the student will understand such concepts as weight, balance, and inverse kinematics.

IMT228
ADV 3D DESIGN GRAPHIC ANIMATON **3** **4**
Pre-Req: IMT227, IMT240
This course covers the design aspects and processes of 3D development as well as advanced concepts such as dynamics. Demonstrations and hands-on practice will reinforce the concepts. Upon completion the students will be able to hone the skills learned in previous classes to create a final practicum project.

IMT230
WEBCASTING **3** **4**
Pre-Req: IMT229 or ECA228
The technology of sending an audio and video stream of the presenter via the internet through a streaming server is the focus of this course. Presentations are created live as well as learning to cast a previously recorded session via the streaming server and played back "on demand".

IMT237
COMPOSITING **3** **4**
Pre-Req: IMT223
Students learn how to create special effects using the green screen, mattes, alpha channels and masks, using special effects software. Upon completion, students will be able to effectively create special effects in various formats. Students will gain these skills through a series of labs and projects utilizing Adobe After Effects.

IMT238
ADVANCED VIDEO PRODUCTION **3** **4**
Pre-Req: IMT242
This course expands on the skills and techniques learned in Lighting & Cinematography. There will be more focus on the creation of HD video and DVD authoring. Student projects will be used to explore the latest techniques in the video industry.

IMT239
MUSIC SYNTHESIS **3** **4**
Pre-Req: IMT129
Software and hardware-based music synthesis and tone generation are the focal points of this course. Discovery of different types of music synthesis and its integration within other forms of recordable audio is also covered.

IMT240
ADVANCED 3D GRAPHIC MODELING **3** **4**
Pre-Req: IMT125
Co-Req: IMT227
This course provides the student with opportunities to learn and refine the 3D modeling, texturing, lighting, and rendering skills learned in earlier courses. Upon completion, the student will be able to effectively use the 3D software to interface to create and render various 3D graphic objects and characters.

Credit Hours | Contact Hours

IMT242
LIGHTING & CINEMATOGRAPHY 3 4
Pre-Req: IMT223
This course covers the topics necessary to design videos from script to screen. Studio practice will reinforce topics such as exposure, composition, framing, and single camera production. Lighting topics include studio and field lighting techniques, artistic and functional lighting design and applications. Upon completion, the student will be able to plan, shoot, and edit short form videos in a variety of genres.

IMT243
ADVANCED COMPOSITING 3 4
Pre-Req: IMT125 or IMT237
This course covers the design and integration of motion graphics with video. Studio projects will reinforce topics such as integration of 3D graphics with video, advanced animation techniques, filters and footage repair. Techniques learned will apply equally to game design and movie special effects. Students will gain these skills through a series of hands-on projects utilizing Adobe After Effects and Autodesk 3DsMax.

IMT244
DIGITAL PAGE LAYOUT & DESIGN 3 4
Pre-Req: IMT253, IMT122, IMT131
This course offers the student a foundation in layout and design for advertising, marketing, newsletter, and other publication materials. Emphasis on design principles for the creation of advertising and publishing materials such as letterheads, business cards, ads, fliers, brochures, and manuals. This capstone course will allow students to master design principles through the use of typography, effective use of color, special graphic effects and output considerations. Students will gain these skills through a series of hands-on projects utilizing Adobe in Design.

IMT245
GRAPHIC ARTS DESIGN II 3 4
Pre-Req: IMT122
This course expands on the skills and techniques learned in Graphic Arts Design. Additionally, there will be more focus on photographic enhancements; working with filters and other tools and options available to enhance graphics in this course. Upon completion of this course, students will develop further understanding and abilities to design and enhance both print and Web media. Demonstrations and hands-on projects are implemented on the computer using Adobe Photoshop.

IMT246
APPLIED MUSIC TECHNOLOGY 3 4
Pre-Req: IMT250
A practical application of the student's knowledge of music, music technology, and computer software/hardware technology. The student will create a number of musical compositions assisted by MIDI software/hardware interfaces and merge these compositions with Web sites, training videos, marketing presentations and other practical applications of software engineering technology.

IMT247
THEORY AND COMPOSITION II 3 4
Pre-Req: IMT134
A continuation of the first course that provides the student with advanced composition, theory, harmony and improvisational skills with the focus on implementation being TV, film and mixed media.

IMT248
MUSIC TECHNOLOGY PRACTICUM 1 2
Pre-Req: IMT239
Co-Req: IMT246
The presentation of music, video and mixed media applications will prepare the student to create a working portfolio to aid in the obtainment of employment. Students are required to present five pieces over the course of the semester to be critiqued and analyzed by their peers and instructors. This course is presented in a theatre style environment with formal rules of theatric engagement.

Credit Hours | Contact Hours

IMT249
TEXTURES FOR 2D AND 3D 3 4
Pre-Req: IMT122
This course covers the creation of professional-quality textures for both 2D and 3D design. Upon completion of this course, students will learn the art and design in the creation of these textures and effects, including basic designs, shortcuts and creating environmental textures. Design skills covered in this course will allow students to proceed to designing textures for 3D gaming among other applications. Learning will be facilitated through a series of projects using current application design software.

IMT250
MUSIC TECHNOLOGY 3 4
Pre-Req: IMT129
Building on the understanding of audio recording developed in IMT129, Music Technology emphasizes commercial music production with advanced discussions and implementations of mixers, digital recording devices, duplicators and software in a lab-based environment. Upon completion, the student will be able to analyze music production needs and create simple, viable presentations of their own projects.

IMT251
AUTHORING & VIDEO COMPRESSION 3 4
Pre-Req: IMT126, IMT252
This course covers advanced topics in video compression for both DVD and the Web. Streaming video, video integration with other Web media and flash video will be covered through a series of production/ compression challenges. DVD authoring standards, compression rates and DVD preparation will also be covered.

IMT252
ADVANCED EDITING & AUDIO/VIDEO 3 4
Pre-Req: IMT223, IMT129
Co-Req: IMT242
This course covers advanced topics in video editing and audio preparation for video. Topics covered include: current practices in multi-camera editing, color correction, and hi-definition conversion. A series of production assignments, in conjunction with IMT239, will cover for surround sound, ADR and basic film scoring.

IMT253
GRAPHIC FOR ILLUSTRATION 3 4
Pre-Req: IMT122
Students will learn how to develop basic illustrations and line art using Adobe Illustrator. Lab focuses on drawing and creating logos, print and Web graphics, industrial devices and medical illustrations.

Information Reporting Technology

IRT121
REALTIME THEORY I 4 8
Introduces to stenotype machine theory and technique, with emphasis on recording, note recording and transcribing practice in preparation for more advanced courses in machine reporting. Students will learn realtime electronic shorthand with instruction utilizing online, computer-aided transcription technology. Upon completion, the student should be able to demonstrate knowledge of stenotype machine theory learned IRT Theory I.

IRT122
REALTIME THEORY II 4 8
Pre-Req: IRT121
Mastery of stenotype machine theory and technique. Instruction and practice to develop recording, note reading and typewritten transcription skills, as well as mastery of realtime electronic shorthand in preparation for more advanced courses in the Information Reporting Technology program. Instruction shall include the use of online, computer-aided transcription technology. Upon completion, the student should be able to write the spoken word with punctuation by means of a conflict-free reporting theory as approved by NCRA to provide instantaneous translation.

Credit Hours | Contact Hours

IRT123
SPEEDBUILDING III 4 8
Pre-Req: IRT130
A required lab for skill development refining techniques necessary for perfecting speed and accuracy in transcription of specialized dictation material. Student will be expected to complete weekly activities, practice realtime/captioning on steno machine, and use online computer-aided transcription technology. This course is designed for self-paced modular instruction. This lab is designed to prepare students to write graduation speed requirements for all options in the Information Reporting Technology program: for the judicial reporting option, passing three 5-minute machine shorthand tests of literary at 180 wpm, jury charge at 200 wpm, and courtroom testimony material at 225 wpm with a minimum of 95% accuracy; and for the captioning option, passing one 5-minute machine shorthand test of literary at 180 wpm with 96% accuracy before writing a 30-minute broadcast news program with a TER (Total Error Rate) goal of 98% accuracy or higher based on total word count.

IRT129
SPEED BUILDING I 4 8
Pre-Req: IRT122
Designed to increase speed, endurance and accuracy for reporting of multi-voice testimony, jury charge, and legal and technical material. A machine speed of 130 wpm is the goal. Emphasis on development of vocabulary, grammar, punctuation, note reading and realtime writing skills. Instruction will include the use of online, computer-aided transcription technology with teacher interaction. The course is designed for self-paced modular instruction and shall incorporate the use of Web-enhanced instruction. Upon completion of each module, students should progress to the next module/speed throughout the program.

IRT130
SPEED BUILDING II 4 8
Pre-Req: IRT129
Designed to increase speed, endurance and accuracy for reporting of multi-voice testimony, jury charge, legal and technical material. A machine speed of 175 wpm is the goal. Emphasis on development of vocabulary, grammar, punctuation, note reading and realtime writing skills. Instruction will include the use of online, computer-aided transcription technology with teacher interaction. The course is designed for self-paced modular instruction and will incorporate the use of Web-enhanced instruction. Upon completion of each module, students should progress to the next module/speed throughout the program.

IRT131
LEGAL TERMINOLOGY 3 4
Instruction in legal terminology in civil law; criminal; and the discovery, trial, and appellate processes. Upon completion, students should be able to comprehend, appreciate, and use legal terms.

IRT132
REALTIME WRITING I 1 2
Pre-Req: IRT121
Using an approved NCRA approved realtime theory, students' realtime writing skills on the steno machine will be reinforced. Mastery of briefs and phrases will be emphasized in realtime writing skills to build up to graduation speeds. Upon completion, students should be able to incorporate brief forms and phrases into their realtime writing for judicial reporting or broadcast captioning.

IRT228
REALTIME TRANSCRIPTION 3 4
Pre-Req: BIO125, IT129
Realtime transcription training using realtime computer equipment to practice and perfect specialized transcription skills in legal, medical, media, and education. The transcription training will be specific to the students' choice of career option. Upon completion, students should be able to proficiently transcribe and format documents.

Credit Hours | Contact Hours

IRT229
REALTIME SOFTWARE APPLICATIONS 1 2
Pre-Req: IRT121
Instruction in operating realtime court reporting software for the production of the legal transcript. Students are taught the process of recording verbatim testimony via a computerized steno machine; reading, translating, and editing the verbatim testimony to produce the legal transcript; file maintenance; dictionary building; EZ keys; globalizing entries. Upon completion, students should be able to demonstrate knowledge and skills in operating and utilizing the different aspects of the realtime court reporting software.

IRT230
BASIC BROADCAST CAPTIONING 3 4
Pre-Req: IRT122
This course is designed to teach students the basics of broadcast captioning. The students will be evaluating their writing skills for captioning, learning captioning style guidelines, creating and managing captioning dictionaries, and the basic formats for writing news, sports, weather, and other broadcasts. Upon completion, students should be able to demonstrate knowledge of realtime/caption production.

IRT231
JUDICIAL PROCEDURES 3 4
Pre-Req: IRT122
Co-Req: IRT229
Introduction to the responsibilities of the judicial reporter in the court system and the freelance environment; legal procedures; reporting techniques; and realtime reporting. Instruction in transcript production; court and transcript forms; researching for transcript production; marking and maintaining exhibits; realtime reporting in a deposition and court environment; the profession and related job opportunities; ethics, including the distribution of the NCRA Code of Professional Ethics; and professional associations. Upon completion, students should be able to demonstrate knowledge in all areas of the responsibilities of the judicial reporter.

IRT232
INFORMATION REPRTING INTRNSHP 2 1
Pre-Req: IRT130
The following internship criteria must be met for each IRT option: Judicial: shall include a minimum of 50 hours of participation (40 hours of actual writing time) under the supervision of a practicing realtime reporter using machine shorthand technology. Graduation requirements must be passed for the judicial option: three 5-minute machine shorthand tests of literary at 180 wpm; jury charge, 200 wpm; courtroom testimony, 225 wpm; with a min. of 95% accuracy; must transcribe a simulated RPR skills test at RPR speed levels in 3.5 hours; must write a simulated CRR skills test at a speed of 180-200 wpm literary for five minutes. Captioning: shall include a minimum of 50 hours of captioning under the supervision of a practicing captioner or instructor. Graduation requirements must be passed for the captioning option: one 5-minute machine shorthand test of literary of 180 wpm must be passed with 96% accuracy before writing a 30-min. broadcast news program with a TER goal of 98% accuracy or higher based on word count.

IRT235
ADVANCED BROADCAST CAPTIONING 3 4
Pre-Req: IRT230
This course is designed to teach students in-depth realtime/caption skills. Topics include how to research specific shows, development and management of specific captioning dictionaries, advanced instruction on captioning style guidelines, utilizing specialized captioning software for reporting in broadcast environments. Upon completion, students should be able to demonstrate realtime/caption production.

Credit Hours | Contact Hours

IRT236
ADVANCED THEORY PRINCIPLES 3 4
Pre-Req: IRT122
This course is designed for those students who already know the steno machine keyboard and who may be enrolled in Speedbuilding I. This course emphasizes advanced review and reinforcement of the theory principles learned in Realtime Theory I/II. Students will review the theory principles through the use of lecture, a text and taped dictation. The instructor will reinforce the principles through theory principle tests; reinforcement of briefs, phrases, and mandatories; and live or audio dictation. Upon completion of this course, students should be able to successfully write a realtime, conflict-free machine shorthand at an accuracy rate of 95% or higher without hesitation and through muscle memory.

IRT237
REALTIME WRITING II 1 2
Pre-Req: IRT122
Using an NCRA approved realtime theory, numeric and alphabetic writing skills on the steno machine will be reinforced. Mastery of writing numbers phonetically and writing proper names using the alphabet in fingerspelling found in the judicial reporting and broadcast captioning settings will be emphasized. Upon completion, students should be able to write numbers fluently using phonetic spelling and fingerspell proper names using stenotyping and the phonetic table of the translation dictionary during timed dictation.

IRT238
REALTIME WRITING IV 1 2
Pre-Req: IRT236
Using an NCRA approved realtime theory, students should be able to build realtime writing speed by writing in 1-, 2-, 3-, and 5-minute increments through live and/or taped dictation at various speeds. Students will increase writing endurance at the steno machine by writing dictation for a minimum of 15 minutes with a 96% accuracy rate. With instructor assistance, students will be able to identify personal strengths and weaknesses in writing technique. This course is a supplemental course to Speedbuilding III. Upon completion, students should be able to write at a controlled speed for a sustained period of time at the accuracy rate of 96%.

IRT239
REALTIME WRITING III 1 2
Pre-Req: IRT122
Advanced instruction in building translation dictionary entries and maintaining specific job dictionaries for use in the judicial and broadcast captioning fields. Students will also make back up copies of the job dictionaries they have created. Upon completion, students should be able to properly maintain any job dictionary created in the realtime software and prioritize dictionaries according to specific usage (judicial reporting, broadcast captioning, CART).

Massage Therapy

MAS121
MASSAGE THERAPY I 6 8
This course introduces students to Massage Therapy as a health care profession. Studied are the history and benefits of Massage Therapy and Massage procedures necessary to complete a full-body, therapeutic massage. Laboratory exercises permit students to practice the individual movements that make up a full-body massage.

MAS122
MASSAGE THERAPY II 2 3
Pre-Req: MAS121, MAS123
This course is a continuation of Massage Therapy I. Students continue to practice procedures necessary to complete a full-body therapeutic massage with an introduction to clinical applications. Students perform massage in a supervised, clinical setting.

Credit Hours | Contact Hours

MAS123
MASSAGE THERAPY A & P I 1 1
Guided study of Anatomy and Physiology with an emphasis on massage therapy specific information. Origin, insertion, innervation and actions of up to two hundred muscles. Students will make visual presentations of assignments involving muscle groups.

MAS124
MASSAGE THERAPY A & P II 2 2
Pre-Req: MAS123
Co-Req: BIO122
General study of Anatomy and Physiology with an emphasis on massage specific information. Eleven basic systems will be studied and correlated with specific disorders. These disorders will be discussed relative to how they would affect the work of a massage therapist. Treatment of the disorders will also be discussed

MAS223
MASSAGE THERAPY REVIEW 3 3
Pre-Req: BIO122
Co-Req: MAS226
This course contains a review of human anatomy and physiology in preparation for the Ohio State Medical Board exam for certification in Massage Therapy as a Limited Medical Practice.

MAS224
MASSAGE THERAPY III 4 5
In this course the students continue to study the practice of Massage Therapy in both a general and clinical setting.

MAS225
MASSAGE THERAPY IV 2 3
In this course students continue to study the practice of massage therapy in both a general and clinical setting.

MAS226
MASSAGE THERAPY V 3 4
Pre-Req: MAS124, MAS225
In this course students will examine various massage therapy practices in the clinical setting. Massage procedures from various works will be used in the study of treatment of systemic and musculoskeletal dysfunctions. (Also reviews for state test.)

MAS227
MASSAGE THERAPY PROCEDURES 2 3
Pre-Req: MAS121
Students will learn procedures to evaluate applicability of massage therapy to a variety of conditions, treatment of those conditions and the integrating of those skills into a medically oriented office. SOAP notes, record keeping for therapeutic applications and insurance billing will be taught.

MAS228
PROFESSONAL PRACTCE & EVALUATN 1 1
Co-Req: MAS225
Investigation into State Medical Board requirements and licensing and examination of topics related to issues relevant to professional massage therapy practice, culminating in in-class presentation. Also application of skills to course instructor followed by comprehensive evaluation of student performance.

MAS229
CLINIC OPERATIONS 2 3
Pre-Req: MAS225
This course permits the student to apply learned skills to the clinical setting. Students will perform intake and assessment of clients based on subjective and objective information and physical assessment determining indications and contraindications for application of massage therapy. Students will design and implement treatment plans and document treatments in SOAP notes utilizing massage therapy office software. Students will learn the skills necessary to manage a professional practice. Examination of the therapeutic relationship between the massage professional and the client will also be covered.

Medical Assisting

MAT121
MEDICAL ASSISTING I — Credit Hours: 4 — Contact Hours: 6

Medical Assisting I introduces the students to the profession of Medical Assisting and their responsibilities in the clinical area of the health care facility. Emphasis is placed on the "Total Concept of Patient Care" communication skills and the techniques employed by the medical assistant during a general physical examination: taking and recording vital signs, measuring visual and hearing acuity, practicing and applying medical and surgical asepsis and infection control. The proper techniques employed in performing irrigation of the ear. Students will begin to understand the process of assisting with minor office surgical procedures, sterile dressing changes and suture removal. Pathophysiology is presented as related to procedures.

MAT122
MEDICAL ASSISTING II — Credit Hours: 4 — Contact Hours: 6
Pre-Req: MAT121

Medical Assisting II focuses on performing and assisting with advanced clinical skills: venipuncture/specimen preparation, electrocardiography, suture insertion, wound irrigation and wound care, gynecological examination, specimen preparation, and instructions for self breast examination, positioning and draping of patients for specific examinations, urinary bladder catheterization, medical records and theory of x-rays and diagnostic radiology testing. Patient communication skills and patient education are employed through role-playing. Documentation of clinical procedures is stressed throughout the course of study. Pathophysiology is presented as related to procedures.

MAT123
MEDICAL ASSISTING III — Credit Hours: 2 — Contact Hours: 3
Pre-Req: MAT122

The "Total Concept of Patient Care" simulation gives Medical Assisting students the opportunity to incorporate and use their acquired knowledge of clinical and administrative procedures in health care delivery while working and managing the S & T Clinic. The S & T Clinic is a structured and controlled OSHA/CLIA compliant environment, simulating a medical office, for the sole purpose of integrating skills and preparing the student for externship in a clinical facility. Medical Assisting III preceeds Medical Assisting Seminar, fifth semester. Seminar is an integral part of MAIII. Students will be recertified in CPR before completion of Medical Assisting III.

MAT124
MEDICAL OFFICE PROCEDURES I — Credit Hours: 3 — Contact Hours: 4
Pre-Req: BCA120 or OAD101

The first eight-weeks this course will focus on preparing students for medical office administrative procedures including medical records management and filing procedures. Students will perform medical transcription with the use of medical dictation equipment and computer word-processing. The second eight weeks will focus on developing an understanding of ethics and various points of view on bioethical issues.

MAT221
MED LAB PROC FOR MED ASSTG — Credit Hours: 3 — Contact Hours: 4
Pre-Req: MAT122

Introduction to basic medical laboratory techniques used in the physician's office with emphasis on quality assurance in all aspects of lab procedures. Laboratory safety and proper use of laboratory instruments is stressed. Our lab is run in compliance with OSHA/CLIA standards. Lab tests taught represent all departments of a clinical lab and includes spirometry. Pathophysiology is presented as related to procedures.

MAT222
INSURANCE FOR MEDICAL ASSISTNG — Credit Hours: 4 — Contact Hours: 5
Co-Req: MAT124, MAT122

This course focuses on developing a knowledge of private, government and managed care insurances. Students will learn to code from a CPT and ICD-9 codebook and complete hard copy manual claims. Students will also learn the manual pegboard system and post charges and insurance payments to the pegboard. This course covers risk management for reimbursement issues following up on unpaid claims, and appealing disallowed claims. Students will fill out hard copy CMS 1500 form.

MAT223
MEDICAL OFFICE PROCEDURES II — Credit Hours: 4 — Contact Hours: 6
Pre-Req: MAT122, ENG124, MAT124, MTH101 or MTH103

This course is designed to build on techniques learned in MAT124 and focus on preparing students for advanced medical office administrative procedures and provides a foundation beginning with professional behavior interpersonal techniques. Hands-on projects are designed for the student to experience appointment scheduling, telephone screening, written communication, billing and collection techniques, general banking, and accounts payable. Medical office computer software is used extensively. Student demonstrates the ability to organize their work, set priorities, and make decisions.

MAT224
PHARMACOLOGY/MEDICATIONS — Credit Hours: 4 — Contact Hours: 5
Pre-Req: MAT122, MTH101 or MTH103

Course focuses on specific drug classifications, their action and usage with direct relationship to diseases and disorders; mathematical units of measure and dosage calculations; methods for preparing and administering oral, intramuscular, subcutaneous, and intradermal medications used in the physician's office and managing the office drug inventory. Pathophysiology is presented as related to medications.

MAT225
EMERGENCY MEDICAL PROCEDURES — Credit Hours: 2 — Contact Hours: 3
Pre-Req: MAT122

This course is designed to enable students to become certified in American Red Cross Professional Rescuer and Standard First Aid. In addition, supplementary information is presented covering manual resuscitation with Ambu bags, administering oxygen, crash carts, and incident reports. Study of the disease process is integrated with illnesses, injuries, and treatment covered in the course.

MAT226
MEDICAL LAW AND MANAGEMENT — Credit Hours: 3 — Contact Hours: 3
Pre-Req: MAT122, MAT223

This course is designed to prepare potential managers and supervisors to develop a broad perspective and gain insight into human relations. The course deals with basic management principles and focuses on problem solving, conflict resolution, hiring, training, appraising and disciplining employees. It also teaches management duties such as marketing the practice, financial management, and physician credentialing. Laws that relate to employment are also part of the course.

MAT227
EXTERNSHIP MEDICAL ASSISTING — Credit Hours: 2 — Contact Hours: 12

The student is placed in a medical facility for 160 hours of practical application of all skills learned in the classroom and for additional instruction in the actual operation and management of the health care facility. The student works under the close observation and supervision of the physician and office staff.

MAT228
OPHTHALMOLOGY I — Credit Hours: 3 — Contact Hours: 3
Pre-Req: MAT121, MAT122

Focuses on anatomy and physiology of the eye; disease pathology, including systemic diseases with ocular manifestation; introduction to optics; pharmacology and microbiology; ocular emergencies and medical care; ophthalmic office procedures; medicolegal aspects of care; and preliminary workup for the ophthalmology patient.

Credit Hours | Contact Hours

MAT229
OPHTHALMOLOGY II 3 3
Pre-Req: MAT228
Focuses on visual field testing; ocular motility; contact lenses, including insertion and removal instruction, care of, advantages and disadvantages of soft and rigid contacts; instrument maintenance and calibration; glaucoma and tonometry, including medical, surgical and laser treatment methods; and clinical optics. Forty hours of clinical externship are required in the ophthalmology office to apply ophthalmology skills, to receive credit for the ophthalmology course, and to receive a certificate of completion.

MAT230
ADV PHLEBOTOMY 3 4
Pre-Req: MAT122
Advanced Phlebotomy is designed for Stark State College of Technology students who have had venipuncture or Certified Medical Assistants with at least one year of drawing experience. It focuses on hospital or clinical phlebotomy and expands to specimen collection, handling and transporting as well as safety and infection control practices that protect a phlebotomist while in class or at a clinical facility. There is emphasis on collecting specimens from hard-to-draw patients and tests that are often unique to a hospital. This course is designed to complete educational requirements for candidates to sit for the National (NCA) Clinical Laboratory Phlebotomy Certification examination. Forty hours of clinical externship in a hospital or clinical facility are required for completion of advanced phlebotomy.

MAT231
REIMBURSEMENT FR HLTH CARE SER 3 3
Pre-Req: BIO101 or BIO121 or BIO123
This course is designed to introduce students to health care reimbursement. Content covers insurance terminology, legal considerations, third party guidelines, reimbursement methods and managed care reimbursement. It also includes an overview of national insurance plans and coding issues that affect reimbursement. There will also be emphasis on tracking and follow-up of processed claims.

MAT232
HOSPITAL PHLEBOTOMY 3 4
Pre-Req: MTH100
This course focuses on anatomy, physiology and medical terminology pertinent to phlebotomy, phlebotomy and microcapillary puncture skills collection/handling of specimens, transporting specimens, off-site testing and drawing in special units of a hospital. Quality assurance, infection control, safety, law and ethics are important elements of the course. Students must attain clinical competency to be eligible for the hospital-based phlebotomy experience. Students who successfully complete the course would be eligible to sit for National Certification in Phlebotomy. Admittance to the class by approval of the program coordinator.

MAT233
MEDICAL ASSISTING SEMINAR 1 1
This course is designed to teach students how to write resumes, cover letters and how to interview for employment. Students will also prepare for externship.

Mechanical Engineering Technology

MET123
MATERIAL SCIENCE 2 3
The study of the science of materials used in the fields of engineering and manufacturing. Emphasis is placed on the physical properties of materials. Areas covered include: stress and strain, hardness, creep, fatigue, metallurgy, equilibrium diagrams, and heat treatments. Advantages, disadvantages and applications of ferrous metals, non-ferrous metals, plastics, elastomers, composites and ceramics are discussed.

Credit Hours | Contact Hours

MET124
STATICS/STR OF MATERIALS 4 5
Pre-Req: MTH121, PHY121
The study of major force systems under conditions of equilibrium. Various methods are used to analyze the effects loads have on structural members and machine components. Topics include force systems, friction, stress and strain, moment and shear diagrams, centroids, moments of intertia, and beam deflection analysis. Emphasis is placed on learning the fundamentals and applying them to solving problems.

MET221
ADV STRENGTH OF MATERIAL 2 3
Pre-Req: MET124
The study of torsion, columns, combined stresses, thin-walled pressure vessels, connections (bolted, riveted and welded), and statically indeterminate beams. Emphasis is placed on learning the fundamentals and applying them to solving problems.

MET222
FLUID POWER 4 5
Pre-Req: MET124
The study of the subjects essential to understanding the design, analysis, operation and application of fluid power systems is the focus of this course. Theoretical principles will be used to develop an understanding of hydrostatics and hydrodynamics. Teamwork skills will be reinforced through hands-on experimentation and written presentation of results. Students will submit formal reports in a format that requires the use of word processing and spreadsheet software.

MET223
DYNAMICS 2 3
Pre-Req: MET124
Methods are developed to analyze kinematics and kinetics of bodies. Practical derivations, equations, and applications of displacement, velocity, acceleration, work, energy, power, impulse, and momentum in both planar and rotational motion will be applied.

MET225
MANUFACTURING PROCESSES 3 4
Students will investigate a variety of manufacturing techniques including casting, powder metallurgy, metal forming, hot and cold working, arc and gas flame welding, rapid prototyping, microelectronic manufacturing, and chip-type machining processes. Scheduled tours of local industry and/or guest speakers augment the material.

MET226
TECH PROJECT-MECHANICAL 2 4
Students will apply knowledge acquired from technical courses and practical work experience to work independently and complete a technical task. A project is chosen by the student and proposed for approval by the instructor. Topics may be chosen from any area of mechanical, electro-mechanical, design, manufacturing, testing, quality assurance, etc. The scope of the project could include a literature survey, schematics, research analysis, design, fabrication, assembly and testing to create a new or optimize a current design or system.

MET227
THERMODYNAMICS & HEAT TRANSFER 3 4
Pre-Req: MTH121
Fundamentals of thermodynamics: heat, work and energy. Thermodynamic processes: constant volume, constant pressure, isothermal, adiabatic and polytropic, P-V-T relationships, work and internal energy. Laws of thermodynamics: enthalpy, entropy and reversibility. Gas power cycles and efficiencies: Carnot, Otto, and Diesel. Fundamentals of heat transfer: conduction, convection, radiation and heat exchangers. Emphasis is placed on learning the fundamentals and applying them to solving problems.

	Credit Hours	Contact Hours

MET228
MACHINE DESIGN 4 5
Pre-Req: MET124
Descriptive, dimensional, and kinematic analysis of machine components including bearings, shafts, couplings, cam, brakes, gear drives, belt and chain drives, and clutches are the focus of this course. Laboratory work includes problem solving in the design of machine components with spreadsheet analysis when necessary.

MET229
ALT ENERGY SOURCES/FUEL CELLS 2 2
This course introduces the student to alternative energy sources, such as solar, wind power, geothermal, hydro-electric, and fuel cells. Nearly half of the course addresses fuel cell topics such as components (anode, cathode, electrolyte), fuels (hydrogen and hydrocarbons), and types of fuel cells (Polymer Electrolyte Membrane, Solid Oxide, Alkali, Phosphoric, Molten Carbonate).

MET230
ANALYSIS/APPS OF FUEL CELLS 3 4
Pre-Req: MET229
This course addresses the different types of fuel cells:Polymer Electrolyte Membrane, Solid Oxide, Alkaline, Phosphoric Acid, Molten Carbonate, and Direct Methanol among others. Material properties, operating characteristics, functions and real world applications are discussed and analyzed through different experiments.

MET231
FUEL CELL SYSTEMS 2 3
Pre-Req: MET230
This course covers in detail fuel cell stack, fuel processor, power conditioner, heat exchanger and the remainder of subsystems for the fuel cell to function as required. Topics include: interconnect plates, series versus parallel electrical conduction, hydrogen fuel and storage, hydrocarbons and fuel processing, instrumentation and programming, power conditioning of DC and AC, heat transfer, and interfacing with the power grid.

MET232
FUEL CELL PROJECT 2 3
Pre-Req: MET231
In coordination with faculty advisor, student works on a project to design and build a fuel cell system by selecting a marketing need (vehicular, portable, home, industry...), determining components, developing cost justification, documenting design process, creating bill materials, procuring necessary materials, documenting methodology assembling a model, evaluating performance, and presenting the proposal.

Management Technology

MGT121
PRINCIPLES OF MANAGEMENT 3 3
Pre-Req: BUS121
This course provides an in-depth, balanced overview of management through coverage of basic management functions: planning, organizing, staffing, directing and controlling. Presents the current insights of open-systems theory, contingency theory, organization theory, organizational behavior and contemporary management science. Upon completion, students should be able to demonstrate an understanding of the above topic areas.

MGT221
SUPERVISION 3 3
Pre-Req: MGT121
This course is organized around the employee in order to emphasize the importance of working with others. Some specific areas covered are: the role of the supervisor, basic concepts of office functions, management of information, motivation, sources of power and authority, work simplification and group dynamics. Upon completion, students should be able to apply current management theory to situations that occur at the supervisory level.

MGT222
SMALL BUSINESS MGT 3 3
Pre-Req: ACC133
Focus on problems of organizing and operating a small business with special emphasis on the creation of the business plan. Case studies are used to reinforce basic business concepts and principles. Upon completion, students should understand the complexities of owning their own business and be able to create a business plan.

MGT223
BUSINESS DECISION MAKING 4 4
Pre-Req: ACC133, MGT121
This course utilizes a multitude of managerial business decision making skills that culminates your business management classroom experience. It involves an actual competitive team-based decision making computer simulation. The course includes in-depth analysis and research into production, inventory, finance, research and development, pricing, product placement, and industry competitiveness decisions. The course requires teamwork and an understanding of all the areas of business decision making to successfully manage a corporation. Upon completion of this course a student should have a greater understanding of the impact of teamwork, functional department interactiveness, and competitive market analysis on everyday business decisions.

MGT224
HUMAN RESOURCE MGT 3 3
Pre-Req: MGT121
Introduction to the effective management of human resources in today's organizations. Emphasis is on the policies and programs necessary to attract, retain and motivate employees. Subjects covered include the legal framework of human resource management, staffing, human resource development, motivation and leadership, compensation, appraisal systems and labor and management relations. Upon completion, students should be able to demonstrate an understanding of the management of the human resource.

MGT227
OPERATIONS MANAGEMENT 4 4
Pre-Req: MGT121, MTH222 or ACC127
Principles and practice of installation, operation and control of efficient operating systems; plant location, layout, scheduling, materials management and quality. Upon completion, students should be able to demonstrate an understanding of efficient operating systems.

MGT232
INTERNATIONAL BUSINESS 3 3
Pre-Req: BUS121
This course focuses on the economic, social and cultural considerations of doing business overseas. The globalization of markets and the growth of overseas business ventures is explored. The need to develop varied techniques for managing people from other cultural backgrounds, the means of minimizing risks in financial transactions, and development of systems for coordinating and controlling operations will be stressed. Techniques to overcome international business barriers are covered. Upon completion, students should be able to demonstrate an understanding of the economic, social and cultural considerations of doing business worldwide.

Medical Instruments Technology

MIS121
MED INSTRUM STERLIZATION I/SEM 4 12
Co-Req: BIO125, BIO101
This course presents the student with an overview of the technical functions of the field of central service/medical instrument sterilization and its application to the hospital environment. Topics include orientation to the work environment, decontamination procedures, infection control, and disinfection. Students gain the technical skills through exposure to the central service area in a hospital/clinic environment.

Credit Hours | Contact Hours

MIS122
MED INSTRUMENT STERIL II/SEM **6** **14**
Pre-Req: MIS121
This course will present the student with an exposure to the technical functions of the field of central service/medical instrument sterilization with an emphasis on sterilization procedures, standards and practice, operations, inventory, distribution and product standardization. Students gain the technical skills through exposure to the central service area in a hospital/clinic environment.

MIS123
INTRODUCTION TO SURGICAL TERM/MCROBIO **3** **3**
This course provides the student with an exposure to terms specific to the field of central service/medical instrument sterilization with special emphasis on surgical terminology and microbiology pertinent to the surgical arena. Emphasis is placed on understanding the relationships between medical products and instruments, how they are used, and the factors in disease transmission that compromise surgical patient outcomes.

MIS221
MED INSTRUMENT STER III/SEMINAR **6** **14**
Pre-Req: MIS122
Co-Req: MIS123
This course presents the student with an exposure to the technical functions of the field of central service/medical instrument sterilization with an emphasis on instrumentation, wrapping, quality assurance, handling, processing, and standards and practice. Students gain the technical skills through exposure to the central service area in a hospital/clinic environment.

Marketing Technology

MKT121
PRINCIPLES OF MARKETING **3** **3**
Pre-Req: BUS121
This course is an introduction to the important role that marketing plays in the successful operation of various enterprises that operate in both the domestic and international arenas. Emphasis is on developing marketing strategies needed to compete effectively in today's rapidly changing competitive environment. Customer buying behavior, market segmentation, quality customer service, the elements of product, distribution, pricing and promotion strategies are examined. Upon completion, students should be able to demonstrate an understanding of the above topic areas.

MKT221
SALES **3** **3**
Pre-Req: MKT121
The selling process is introduced in detail. Securing and opening the sales interview, delivering the sales presentation, answering objections and closing the sale are all incorporated during the semester. The student will be required to give a sales presentation in class. Upon completion, students should understand the selling process and be able to make an effective sales presentation.

MKT222
ADVERTISING **3** **4**
Pre-Req: MKT121
Provides an overview of the field of advertising, including its place in marketing, media considerations, design principles, budgeting and planning. Included is a project consisting of the design of a total campaign. Upon completion, students should be able to demonstrate an understanding of the field of advertising.

MKT226
SUPPLY CHAIN MANAGEMENT **3** **3**
Pre-Req: MKT121
An introduction to the processes and activities associated with cost-effective industrial procurement and the internal management of all materials and equipment needed by a manufacturer to produce products or provide services. Upon completion, students should be able to demonstrate an understanding of the processes and activities associated with cost effective purchasing.

Credit Hours | Contact Hours

MKT227
CONSUMER BEHAVIOR **3** **3**
Pre-Req: MKT121
This course provides in-depth knowledge of consumer buying behavior. It includes the study of the various cultural, social, personal and psychological factors that influence consumer market behavior and strategy. Upon completion, students should be able to demonstrate an understanding of the factors that influence consumer behavior.

MKT228
BUSINESS TO BUSINESS MKT **3** **3**
Pre-Req: MKT121
This course studies industrial and organizational buyer behavior. The study of strategic marketing management practices of firms selling to business organizations, government agencies and institutions are integral to the course. Upon completion, students should be able to demonstrate an understanding of industrial and organizational buyer behavior.

MKT229
MARKET PLANNING **4** **4**
Pre-Req: MKT121
This is a capstone course that focuses on the significant procedures, processes and analysis that leads the student through the comprehensive market planning process. Methodology includes market research, company and industry analysis, and the development of the processes required in the completion and presentation of the market plan. Upon completion, students should be able to demonstrate an understanding of the creation, analysis, and preparation in the completion of the market planning process.

MKT232
INTERNET MARKETING **2** **3**
Pre-Req: MKT121
This course takes a systems and relationships approach to exploring e-business marketing. The course addresses the basic principles that underlie marketing and how e-business marketing techniques fundamentally change the traditional marketing process. A framework is developed for understanding the forces during the Internet revolution in marketing and business. Lab activities include using the Internet to explore ways to improve quality and customer support, personalize product and messages, generate traffic, build community, price in realtime, and create new channels. Upon completion, the student will understand the use of the Internet in making markets and the main trends affecting the Internet.

MKT233
MARKET RESEARCH **3** **3**
Pre-Req: ACC127, MKT121
This course provides knowledge and application to the Market Research method and practices to be successful in today's business arena. It includes the study of the role of marketing research, research design, data collection skills, communication research results and the management of marketing research. Upon completion, students should be able to demonstrate an understanding and practical application of field of marketing research.

MKT234
PRINCIPLES OF TRANSPORTATION **3** **3**
Pre-Req: MKT226
This course will provide a thorough presentation of how transportation relates to logistics management and supply chain management. It will include an exposure to management initiatives and control techniques in transportation. The student will leave the course with a broad and general exposure to transportation and the management of transportation from both the carrier and shipper perspectives.

Credit Hours | Contact Hours

MKT235
INTRODUCTION TO LOGISTICS 4 4
Pre-Req: ACC127
This course introduces the student to the role of logistics in national and multinational business and government activities. A variety of analytical tools and techniques useful in solving logistics will be explored. The student will understand the individual components of logistics and their interrelationships within individual companies and within the supply chain.

Medical Laboratory Technology

MLT121
FUNDAMENTALS OF LAB TECH 3 4
This course is designed to expose the student to basic skills and techniques used in the clinical laboratory. Topics to include: lab safety, lab units of measurement and calculations, preparation of solutions, care and use of lab equipment, pipetting and concepts of quality control. Phlebotomy, obtaining blood specimens by venipuncture and skin puncture is part of this course.

MLT122
URINALYSIS 2 3
Course is structured to expose the student to the analysis of urine by macroscopic, chemical and microscopic techniques to determine the presence of soluble, insoluble substances and their relationship to disease. The class uses urine specimens, prepared slides and case histories.

MLT123
HEMATOLOGY I 3 4
This course covers basic hematological procedures. Topics include automated and manual blood cell counting techniques, red cell indices and morphology, reticulocyte counts, total eosinophil counts, platelet counts, erythrocyte sedimentation rates, normal white blood cell differentials and abnormal white blood cell differentials by using unknown blood samples, prepared abnormal slides, kodachromes and case histories. Also, reinforcement of venipuncture and finger stick techniques.

MLT124
HEMATOLOGY II 4 6
Pre-Req: MLT122
Course is designed to reinforce hematological techniques previously learned by the student in Hematology I. Emphasis is placed on white blood cell differentials with blood cell morphology and associated disease states. Other topics, with clinical application, include: cerebral spinal fluid cell counts, sickle-cell preps, the leukemias, infectious mononucleosis and other blood dyscarsia by prepared microscopic slide collection, kodachromes and case histories, and coagulation studies.

MLT125
IMMUNOHEMATOLOGY 5 7
Pre-Req: MLT122
This course introduces the concepts of basic genetics of red cell antigens. The student will study the significance of the blood cell antigens and antibodies. The course includes ABO and Rh typing, crossmatching procedures, antibody detection and identification. A study of hemolytic disease of the newborn, its treatment and detection is included. Other topics in the course are composition and use of the specific blood component, overview of donor requirements.

MLT221
IMMUNOLOGY/SEROLOGY 3 4
The course is designed to introduce the concepts of the immunological response in health and in disease. Included is a study of diseases commonly diagnosed by serological techniques. The course introduces the principles of serologic tests commonly performed in the clinical laboratory and interpretation of tests. The student will have the opportunity to perform a variety of laboratory procedures, including agglutination, precipitation and enzyme-linked immunoassay.

Credit Hours | Contact Hours

MLT222
CLINICAL CHEMISTRY 5 7
Pre-Req: BIO123 or BIO121
The course is designed to introduce the student to the principles of laboratory instrumentation, clinical chemistry procedures and quality control concepts. The course covers renal and liver function; carbohydrate, lipid and protein metabolism; hormones; electrolytes and mineral balance; blood gases; and clinical enzymes and therapeutic drug monitoring. The class uses lecture, case studies and laboratory procedures.

MLT223
CLINICAL MICROBIOLOGY 7 10
Pre-Req: BIO221, MLT124
The student will study the morphology and identification of microorganisms commonly found in humans, their relationship to disease states and their susceptibility to antibodies. Topics include: basic structures and functions of bacteria; culture, growth and development requirements; classification of microbes; infectious disease; control of disease; laboratory safety; unknowns for identification from ATCC (American Type Culture Collection) seeded cultures; videotapes and kodachromes. Other topics include mycology, parasitology and virology.

MLT224
DIRECTED PRACTICE/SEM 10 42
The student has the opportunity to perform clinical laboratory testing using modern equipment. Part of the clinical experience occurs at the college under the direction of MLT faculty. During the remainder of the experience, the student is assigned to an affiliated hospital where she/he is under the supervision of a practicing laboratorian. The student rotates through the clinical laboratory 40 hours a week. Experiences include operating and maintaining sophisticated laboratory analyzers, evaluation of test results, refining phlebotomy skills, interaction with the clinical laboratory staff, with other health care professionals, and with the patient. A seminar is included in this course and meets at the college.

Mechanical Service Technology

MST121
BLUEPRINT READING 2 3
This course provides the opportunity for students to develop the skills of reading and interpreting blueprints. Orthographic projection and concepts of visualization are discussed before the various types of blueprints are introduced. "The reading of," rather than the drawing of blueprints is emphasized throughout the course, although freehand sketching is included. Types of prints covered include sheet metal, building, piping, hydraulic and electrical.

MST122
HYDRAULC & PNEUMATIC PRI 3 4
Pre-Req: MTH101 or MTH103
Co-Req: MST123
The study of fluids, their properties, behavior and applications. Topics cover compressible and incompressible fluids, viscosity and basic hydraulic and pneumatic pumps, actuators, valves and piping used.

MST123
HYDRAULC & PNEUMATIC APP 3 4
Pre-Req: MTH101 or MTH03
Co-Req: MST122
The course deals with the study of hydraulic applications, types of circuits used, how to pipe the various systems and how to troubleshoot the hydraulic/pneumatic circuits.

MST124
FURNACE COMBUSTION PRINCIPLES 1 1
Fuels, the chemistry of combustion, ratio for perfect combustion, mixing of air and fuel, products of combustion, efficiency, heat transfer, heat loss, pressure terminology, burner components, control valves and safety are all topics that are covered.

Credit Hours | Contact Hours

MST125
BASIC PUMPS 3 4
Co-Req: MTH101 or MTH103
This course covers the centrifugal, propeller, turbine, rotary, reciprocating, metering and special purpose pumps. Pump applications, selection and routine maintenance are also reviewed, along with various types of packings and seals that are used.

MST126
PIPEFITTING PRINCIPLES AND APPLIC 4 4
Pre-Req: MTH101 or MTH103
Piping systems, valves, fittings, metal piping and non-metallic piping are identified and their use and maintenance are presented. Strainers, filters, traps and other accessories such as pressure and temperature gauges are discussed in detail, including a detailed description of their operation and required maintenance. The procedures, use, and application of the BOCA basic plumbing code is also covered.

MST127
PRINCIPLES OF WELDING 3 3
Co-Req: MST128
Instruction in preparation, cutting, and joining similar and dissimilar metals by welding using gas or electrical processes. Oxygen/acetylene and AC/DC electric are the major techniques used, but other processes will be reviewed.

MST128
WELDING LAB 3 6
Co-Req: MST127
Safe working procedures are reviewed to teach the student safe working habits while using welding and sheet metal forming, cutting and joining equipment. Instruction on arc, MIG, and TIG welding equipment follows with daily practice when welding in horizontal, vertical and overhead positions. A welding project can be selected later in the course to further the student's knowledge and mastery in welding and shaping actual useable items. Gas welding and cutting is also taught and practiced during this course.

MST130
ELEMENTS OF MICROPROCESS 4 3
Pre-Req: EST128
The study of microprocessor system hardware including basic understanding of the software used to control microprocessor systems. Troubleshooting techniques are studied and applied to service any microprocessor system. Meters, oscilloscopes and various probes are used in servicing work.

MST131
STATS PROCESS CTRL CHART 2 2
Pre-Req: MTH101 or MTH103
This course will introduce students to the concepts of variation and defect prevention. Students will learn the formulas and the correct application of control limits for variable and attribute control charts as well as how to plot data and apply basic detection rules for process control.

MST133
PRESS WORKING FUNDAMENTALS 2 4
This course covers metal deformation theory, presses and ancillary equipment, die construction and die component identification. The student will draw various detailed components of dies, using a variety of drafting techniques.

MST134
HYDRAULIC AND PNEUMATIC SYS 6 8
Co-Req: MTH101 or MTH103
This course is a combination of MST122 and MST123 and is the study of fluids, their properties, behaviors and applications. Topics include: basic hydraulic and pneumatic pumps, actuators, valves, piping, hydraulic and pneumatic applications, the various types of hydraulic and pneumatic circuits, and how to troubleshoot these circuits.

Credit Hours | Contact Hours

MST135
PLUMBING AND PIPE CODE PRINCIPLE 3 3
Course concentrates on plumbing rules and regulations governing the installation of simple and complex plumbing systems with an emphasis on the specifications and regulations pertaining to joints, traps, clean-outs, water distribution, fixtures, and drainage.

MST221
MECHANICAL DRIVE COMPON 3 4
The study of bearings, shafts, couplings, cams, brakes, gear drives, belt drives, chain drives and clutches. Included are component application and maintenance.

MST223
HYDRAULC AND PNEUMATC ELEC 2 2
This course covers the study of fluids, their properties, behavior and applications. Various hydraulic and pneumatic circuits, along with cycle charts and associated electrical circuits, are reviewed. Students are required to know components and their identification symbols and operations.

MST224
DIMENSIONAL METROLOGY 2 3
An in-depth study of measuring principles, instruments and techniques. This course covers the measuring tools most commonly used in industry. Course covers how to read and use these instruments, how to prevent the most common errors and how to minimize errors.

MST225
DC CRANE CONTROL 1 1
This course covers basic DC crane control including operator controls, DC motors, and relay control with an emphasis on maintenance troubleshooting using blueprints and schematics.

MST226
TUNGSTEN INERT GAS WELD 3 5
Pre-Req: MST127, MST128
Study of standard and programmable TIG welding equipment: welding of various metals such as aluminum, stainless steel, copper, and mild steel with considerations given to variables such as shielding gas types and sizes, and types of tungsten electrodes.

MST227
METALLIC INERT GAS WELD 3 5
Pre-Req: MST127, MST128
Study of application and use of continuous consumable with electrode application and MIG welding equipment. Properties of gases with regard to flow and regulation in gas metal-arc. Welding techniques are studied in relation to welding steels and non-ferrous materials.

MST228
SHIELDED METAL ARC I 3 5
Pre-Req: MST127, MST128
Continuation of shielded ARC welding as it relates in vertical, overhead 45, and overhead positions, using E-6010 and E-7018 low hydrogen type electrodes.

Medical Transcription

MTC121
MED TRANS/TERM I 5 8
Co-Req: BIO123, BIO125, OAD121
Transcription of dictated medical reports organized by body system and workbook exercises also organized by body system. Emphasis on the development of accuracy and medical knowledge for the transcription of office notes, letters, operative reports, discharge summaries, procedure reports, history and physical examination reports, emergency room notes and neuropsychological evaluations. Utilizing reference materials and other resources effectively; proofreading and editing techniques. Understanding professional and confidentiality issues in medical transcription.

Credit Hours | Contact Hours

MTC122
MED TRANS/TERM II 5 8
Pre-Req: MTC121
Co-Req: BIO124, OAD129
Transcription of dictated medical reports with emphasis on the development of accuracy and medical knowledge for the transcription of office notes, operative reports, discharge summaries, procedure reports, radiology reports, history and physical examination reports and autopsy reports. Utilizing reference materials and other resources effectively; proofreading and editing techniques; grammar and punctuation review. Completion of written exercises designed to help students achieve an integrated understanding of the multifaceted world of medicine.

MTC123
ADV MED TRANSCRIPTION 3 6
Pre-Req:MTC122
Co-Req: BIO222
Transcription of dictated medical reports with emphasis on the development of accuracy and medical knowledge for the transcription of operative reports, discharge summaries, radiology reports, history and physical examination reports, pathology reports. Utilizing reference materials and other resources effectively; proofreading and editing techniques; grammar and punctuation skill building. Thirty-six-hour practicum in a medical transcription setting for students meeting established criteria.

Mathematics

MTH100
COLLEGE MATHEMATICS 3 3
This course prepares students for future college math courses. Topics include arithmetic operations on whole numbers, fractions and decimals. Percentages, ratios and proportions, and application problems are covered. Use of a scientific calculator is included.

MTH101
INTRODUCTION TO ALGEBRA 4 4
Pre-Req: MTH100
Topics are signed numbers and variable expressions, solving equations and inequalities, polynomials, factoring, algebraic fractions, graphs and linear equations.

MTH103
ELEMENTS OF ALGEBRA 5 5
This course integrates arithmetic and algebra. Arithmetic operations on whole numbers, fractions and decimals are studied as signed numbers. Percentages, ratios and proportions, and application problems are covered. Other topics include variable expression, solving equations and inequalities, polynomials, factoring, algebraic fractions, graphs and linear equations.

MTH121
COLLEGE ALG AND TRIG I 4 4
Pre-Req: MTH101 or MTH103
Topics are fundamental operations of algebra, functions and graphs, trigonometric functions, systems of linear equations, determinants, factoring, fractions, quadratic equations, functions of acute angles, solving right triangles and functions of any size angle.

MTH122
COLLEGE ALG AND TRIG II 3 4
Pre-Req: MTH121
Topics are solving oblique triangles, vectors, graphs of trigonometric functions, complex numbers, exponents, radicals, exponential and logarithmic functions, higher degree equations, additional equations and inequalities.

MTH123
INTERMEDIATE ALGEBRA 3 3
Pre-Req: MTH101 or MTH103
Topics are fundamental operations of algebra, functions and graphs, systems of linear equations, factoring, fractions and quadratic equations.

Credit Hours | Contact Hours

MTH221
CONCEPTS OF CALCULUS 3 3
Pre-Req: MTH122
A study of the theory and techniques of analytic geometry, differential and integral calculus, including variables, functions, limits, differentiation, integration and applications of the derivative and integral.

MTH222
STATISTICS 3 3
Pre-Req: MTH100
Presents statistical techniques and methods. Graphical and tabular presentation of data, descriptive statistical parameters, probability concepts, statistical distributions, sampling, estimation and hypotheses testing and correlation.

MTH223
ANALYTIC GEOMETRY-CAL I 4 4
Pre-Req: MTH122
Analytic geometry, limits, continuity, derivatives, tangent and normal lines, derivatives of trigonometric functions, related rates, Newton's method, Rolle's theorem, mean value theorem, extreme of functions, antiderivatives, definite integrals, indefinite integrals, areas and volumes.

Nursing

NUR121
FUND CONCEPTS IN NURSING 6 12
This course introduces concepts basic to nursing with an emphasis on the nursing process and assessment skills. Technical nursing skills to maintain, restore, and/or promote basic health care are presented. The health care needs of the older adult are examined. Content also includes an explanation of the historical perspectives of nursing as it impacts on the present associate degree nurse as a member within the profession of nursing and the health care delivery system. Select legal, ethical and social issues affecting nursing are addressed.

NUR122
NURSE CARE CHILDBEAR FAM 4 8
Pre-Req: BIO122, CHM122, ENG124, NUR221
This course focuses on nursing care of the child-bearing family. New trends in maternity-child nursing are included.

NUR123
NURSING CARE OF CHILDREN 4 8
Co-Req: NUR122
This course focuses on nursing care of children and their families experiencing alterations in health. Nursing care plans are developed for all age ranges of children. Alterations in health are studied in relation to their effect on the developmental status of children.

NUR201
TRANSITION FOR LPNS 5 9
This course is designed for the licensed practical nurse who is admitted to the Nursing Program with advanced standing. Content includes introduction to ADN philosophy, refinement of the nursing process and nursing assessment, role transition and select trends in nursing. Select nursing skills will be evaluated in the learning laboratory as a means of validating safe performance of these skills.

NUR221
NUR CARE PERSON/ALT I 6 12
Pre-Req: BIO121, CHM121, NUR121, PSY121
This course introduces the nursing care of persons with alterations in health, with continued emphasis on technical nursing skills. The peri-operative experience is also introduced. The health care needs of the young and middle adult are examined.

Credit Hours | Contact Hours

NUR222
NUR CARE PERSON/ALT II 8 16
Pre-Req: PSY123
This course provides for further development and application of concepts in nursing of persons experiencing alterations in health. Principles in oncology nursing are introduced. The course examines the basis of a therapeutic relationship between the nurse and the client. Integrated within the course is the use of the nursing process with clients with common alterations in psychosocial health.

NUR223
NUR CARE PERSON/ALT III 8 18
Pre-Req: NUR221
This course continues to develop the knowledge base necessary for nursing practice. Initially, the course focuses on the nursing care of clients with more complex and acute health problems. Emergency nursing principles are introduced. Management concepts, the organization as a system and the nurse as a manager of client care are subsequently addressed. Application of these concepts is facilitated through a preceptorship. This directed nursing practice will assist in role transition from student to beginning associate degree nurse.

NUR224
NURSING SEMINAR 1 1
Pre-Req: BIO221, NUR222, SOC121
Co-Req: NUR223
This course examines issues related to the role transition from student to entry-level associate degree nurse. Emphasis is placed on student's involvement in exploring issues relevant to practice as a staff nurse.

Administrative Information Technology

OAD100
COMPUTER APP-WINDOWS AND CONCEPT 1 2
This course introduces students to basic computer concepts and the Windows operating system. Upon completion, students should be able to demonstrate an understanding of how the computer functions, applications for which it is used and graphical user interfaces.

OAD101
ALPHANUMERIC KEYBOARDING 1 2
This course covers the working knowledge and basic skills in alphanumeric touch keyboarding. No prior knowledge of keyboarding is required. Upon completion, students should be able to use the proper techniques for alphanumeric keyboarding.

OAD102
COMPUTER APPLICATIONS-WORD 1 2
Pre-Req: CAL104, CAP120, IDS120
This course covers the use, styles and features of word processing programs. Upon completion, students should be able to utilize MS Word as a basic business tool.

OAD104
COMPUTER APPLIC-POWERPOINT 1 2
Pre-Req: OAD100 or OAD125 or BCA120 or IDS120
This course covers the use, styles and features of graphic presentation programs. Upon completion, students should be able to utilize MS PowerPoint as a basic business tool.

OAD105
COMPUTER APPLICATIONS-EXCEL 1 2
Pre-Req: OAD100 or BCA120 or OAD125 or IDS120
This course covers the use, styles and features of spreadsheet programs. Upon completion, students should be able to utilize MS Excel as a basic business tool.

Credit Hours | Contact Hours

OAD106
COMPUTER APPLICATIONS-ACCESS 1 2
Pre-Req: OAD125 or OAD100 or BCA120 or IDS120
This course covers the use, styles and features of database application programs. Upon completion, students should be able to utilize MS Access as a basic business tool.

OAD107
DIGITAL TECHNOLOGIES 1 2
This course develops proficiency in using voice recognition software and transcription equipment to produce business documents. This course also introduces newer technologies that have gained acceptance within the workplace including the use of scanners, digital cameras, personal digital assistants and other digital devices. Upon completion, students should possess a working knowledge of voice recognition software, transcription equipment, and other emerging technologies.

OAD108
MS OUTLOOK 1 2
This course covers the use, style, and features of the Microsoft Outlook program. Upon completion, students should be able to utilize Microsoft Outlook as a communication and business tool.

OAD121
KEYBOARDING/FORMATTING 3 4
This course is designed to refine the fundamentals of "touch" control of the keyboard and proper keyboarding techniques. KNOWLEDGE OF KEYBOARDING IS REQUIRED. Major objectives are to build speed and accuracy at the keyboard and to apply keyboarding skills in the formatting of business correspondence, tables and reports. Upon completion, students should be able to format a variety of business documents using a popular word processing package and achieve a minimum keyboarding skill.

OAD127
WP-MICROSOFT WORD 3 4
Pre-Req: BCA120, OAD121
This course covers the concepts, functions, and features of the Microsoft Word program. Creating, editing and storing text are emphasized. Upon completion of this course, the student should be able to produce a variety of professional-looking documents.

OAD128
DTP-MICROSOFT PUBLISHER 3 4
Pre-Req: BCA120, OAD131
This course covers the concepts and applications of desktop publishing using Microsoft Publisher. Emphasis is placed on the creation of various types of high-quality documents that combine text and graphics. Upon completion, students should be able to design and produce professional business documents and publications.

OAD129
KEYBOARDING/SKILLBUILDING 1 2
Pre-Req: OAD121
This course is designed to give students an opportunity to further develop and refine keyboarding skills. Emphasis on drill work is to improve keyboarding speed and accuracy on a microcomputer. Upon completion, students should be able to diagnose their specific areas of weakness on the keyboard and improve both speed and accuracy.

OAD130
COMM AND TRANSCRIPT SKILLS 3 3
This course emphasizes the elements of written communication and proofreading techniques for the transcription and preparation of business documents. Upon completion, students should be able to use proper grammar, punctuation, and proofreading skills in written and oral communications.

Credit Hours | Contact Hours

OAD131
GRAPHIC DESIGN CONCEPTS 3 4
This course is an introduction to computer graphic design techniques for electronic publishing. Desktop publishing design concepts will be applied to the creation of effective business documents, forms, and Web sites. Upon completion, the students should be able to design attractive and effective business document layouts.

OAD132
RECORDS MANAGEMENT 3 4
This course is an introduction to the fundamentals of a records and information management program. Emphasis is placed on learning and applying standard rules for alphabetic storage and retrieval including the subject, numeric and geographic filing methods. Upon completion, students should be able to demonstrate an understanding of the components of a records management program and competence in applying the generally accepted standard filing rules.

OAD224
LEGAL OFFICE PROCEDURES 3 4
Pre-Req: OAD121, OAD130
This course is an introduction to the unique characteristics of law office organization and management with an emphasis on computer applications in law. A general introduction to non-litigation responsibilities and fundamentals of grammar, style and letter writing are covered. Upon completion, students should be able to demonstrate an understanding of concepts and procedures in a law office.

OAD226
SPRSHEET MICROSOFT EXCEL 3 4
Pre-Req: BCA120
This course covers spreadsheet applications on the microcomputer using the Microsoft Excel program. Upon completion, students should be able to demonstrate proficiency in using MS Excel in an office setting to solve common business problems.

OAD227
ADMIN PROCEDURES AND SYS 3 4
Pre-Req: OAD121 or OAD129,OAD130
This course places emphasis on an administrative office setting and information systems. Areas covered include keyboarding and composing of various office correspondence, processing mail, dealing with office visitors, maintaining an electronic calendar, making travel arrangements, e-mail, voice mail, fax, copies and telephones. Office problems, practices and procedures are also emphasized. Upon completion, students should be able to demonstrate an understanding of these office procedures and the roll of the administrative assistant in performing these tasks.

OAD232
ADMIN INFO TECH PRACTICUM 3 2
Students work a total of 60 hours for businesses outside the college or for college faculty and/or staff. Weekly instructor-guided activities are part of this course, which may include required class attendance. Upon completion, students should be able to demonstrate proficiency in administrative tasks and skills in a work environment.

OAD234
ADMIN INFO SPECIAL TOPICS 2 2
Selected topics on areas of interest to Administrative Information Technologies majors through seminar meetings and/or individualized research. Upon completion, students should be knowledgeable in current trends and issues in office administration technology.

OAD235
LEGAL RESEARCH AND WRITING 3 4
This course introduces the student to the basics of legal writing, document drafting skills and legal research strategies used in assisting lawyers in the preparation of legal documents.

Credit Hours | Contact Hours

OAD236
DB APP MICROSOFT ACCESS 3 4
Pre-Req: BCA120
This course covers database applications on the microcomputer using the Microsoft Access program. Upon completion, students should be able to demonstrate proficiency in using MS Access to solve common business problems.

OAD237
LEGAL OFFICE APPLICATION 3 4
Pre-Req: OAD224, OAD239
This course is designed for students to gain practical experience in preparing legal documents selected from actual cases, review general information about the tasks assigned, follow established procedures and learn the job responsibilities of a legal assistant through simulated activities. Fundamentals of grammar and punctuation skills, as well as the formatting of legal documents, are emphasized. Upon completion, students should be able to perform legal office responsibilities and produce a variety of legal documents using word processing, spreadsheet, database, and presentation software packages.

OAD238
MICROSOFT FRONT PAGE 3 4
Pre-Req: BCA120, OAD131
This course covers the concepts, design and application of Web page publishing using Microsoft Front Page. Students will produce Web pages by combining text, graphics and scanned images. Upon completion, students will be able to design and produce professional Web pages using advanced publishing features.

OAD239
LEGAL TRANSCRIPTION 3 4
Pre-Req: OAD129, 0AD130
This course is designed to prepare students to perform legal transcription in a law office or other legal settings. Classroom instruction will be provided in the different areas of law, the judicial system and legal terminology. Provide students with the knowledge, terminology and background needed to prepare legal documents. Upon completion, students should be able to proficiently transcribe and format a variety of legal documents.

Occupational Therapy

OTA121
FOUNDATIONS OF OT 3 4
Explains the profession of occupational therapy, the roles and functions of occupational therapy personnel, the areas of occupational performances and the theoretical basis of using goal-directed activities. Observation in local occupational therapy clinics is scheduled.

OTA122
THERAPEUTIC MEDIA 3 6
Pre-Req: OTA121
Skill development in selected activities, screening and assessments with the emphasis on psychosocial, pediatric and geriatric performance, use of equipment, individual and small group teaching, analysis of activities, use of O.T. Frames of Reference and O.T. Frameworks.

OTA123
PSYCHOSOCIAL ASPECTS OT 4 4
Pre-Req: OTA121, OTA122, OTA124, PSY121, PSY221
Introduction to various health-promoting and inhibiting factors as they relate to occupational therapy practice. Provides training related to one-on-one and group treatment for individuals with psychiatric and/or social impairments. Emphasis on utilizing therapeutic use of self, adapted activities, and the environment as the primary means of promoting psychological well-being and enhancing occupational performance.

	Credit Hours	Contact Hours

OTA124
PSYCHOSOCIAL CLINICAL EX **3** **5**
Pre-Req: OTA121
Co-Req: OTA123
Skill development in group processes and didactic interactions. Supervised work experience and interactions with persons who have psychological dysfunctions.

OTA221
DEVELOP ASPECTS IN OT **4** **4**
Pre-Req: BIO123, OTA121
Identification and description of handicapping conditions existing from birth or through adulthood. Instruction in occupational therapy theories and treatment for individuals with developmental and learning impairments. Emphasis on therapeutic techniques to enhance occupational performance from birth through adulthood.

OTA222
DEV CLINICAL EXPERIENCE **3** **5**
Pre-Req: BIO123, OTA121, OTA123, OTA124
Training of transfer techniques, range of motion, inhibition and facilitating techniques. Training in the use of self-maintenance skills and assistive devices. Supervised work experience in a school, hospital or workshop servicing clients with developmental disabilities.

OTA223
LIFE SPAN DEVELOPMENT **5** **5**
Pre-Req: ENG124 or ENG105
The study of human growth and development from birth through old age. Focus is on a multi-theoretical approach defining organic and environmental determinants of illness vs. wellness. Students explore therapeutic treatment implications related to application of developmental principles in working with various patient populations.

OTA224
OT IN PHYSICAL DYSFUN **4** **4**
Pre-Req: BIO124, OTA121, OTA122, OTA123, OTA124
Instruction in occupational therapy theories, assessment screening and treatment for individuals with physical impairments and high risk medical conditions. Emphasis on use of therapeutic activities to restore, maintain and/or facilitate physical well-being and independence.

OTA225
PHYS DYSFUNTION CLINIC **3** **5**
Pre-Req: OTA222
Co-Req: OTA224
Skill development in selected activities with emphasis on work simplification, fabrication of orthotics and routine evaluation procedures. Supervised work experience in a hospital or clinic setting treating individuals with neurological, orthopedic and other medical conditions.

OTA226
OT ASST SEMINAR **2** **2**
Pre-Req: OTA224, OTA225
Examination and discussion of the professional roles and responsibilities of the occupational therapy assistant. Includes exploration of traditional and non-traditional roles, certification, conflict resolution, collaboration of OTR and COTA, ethics and legal aspects of treatment.

OTA227
CLINICAL APPLICATIONS I **3** **40**
Pre-Req: OTA224, OTA225, OTA226
Supervised field work placement designed to provide in-depth experience in and responsibility for delivery of services to patients/clients. Emphasizes the application of academically-acquired knowledge leading to the performance level expected of an entry-level occupational therapy assistant.

	Credit Hours	Contact Hours

OTA228
CLINICAL APPLICATIONS II **3** **40**
Pre-Req: OTA224, OTA225, OTA226
Supervised field work placement designed to provide in-depth experience and responsibility for delivery of services to patients/clients. Emphasizes the application of academically-acquired knowledge leading to the performance level expected of an entry-level occupational therapy assistant.

Philosophy

PHL122
ETHICS **3** **3**
Uses historical and contemporary theories to examine the role and application of ethics to a variety of personal and professional modern-day situations.

Physics

PHY101
PRINCIPLES OF PHYSICS **4** **5**
Pre-Req: MTH101 or MTH121 or MTH103
Survey course that assumes no familiarity with physics. Space, time, matter, motion, force, momentum, mechanical energy, heat, electricity, magnetism, light, units of measure and other concepts are studied descriptively. Basic calculation and problem-solving techniques are introduced, including a brief review of elementary algebra. Laboratory work emphasizes how to read measuring instruments, proper use of measured data in calculations, and how measured data can be used to test theories of physics.

PHY121
PHYSICS I **4** **5**
Co-Req: MTH121
Study of motion, force, momentum, energy, rotational dynamics and torque, centripetal force and gravity, structure and properties of matter, fluids, vibrations and waves. Problem solving in orientation, emphasizing the application of formulas, algebra and trigonometry to physical situations. Laboratories focus on the correct reading of measuring instruments, proper handling on measurements in calculations and testing physical theories using measured data.

PHY122
PHYSICS II **4** **5**
Pre-Req: MTH121, PHY121
Study of heat, electricity, magnetism (including circuits), electromagnetic radiation (including light), and optics. Problem-solving in orientation, emphasizing the application of formulas, algebra and trigonometry to physical situations. Laboratories focus on the correct reading of measuring instruments, proper handling on measurements in calculations and testing physical theories using measured data.

Political Science

PSC121
POLITICAL SCIENCE **3** **3**
An examination of the nature, purpose and forms of American government; the relationship between function and structure; the dynamics of political change; and governmental problems of modern society.

Psychology

	Credit Hours	Contact Hours

PSY121
GENERAL PSYCHOLOGY 3 3
Surveys the scientific study of behavior, addressing a wide range of traditional topics, including learning, memory and cognition, sensory-perceptual processes, physiology and behavior, motivation and emotion, intelligence, personality and social interaction. Emphasizes classical and current theory and research, with selected attention to practical application.

PSY122
PSYCHOLOGY OF ADJUSTMENT 3 3
Pre-Req: PSY121
Examines selected concepts from various areas of psychology relating to adaptation to change. Adjustment is concerned with understanding how individuals react to changing life situations and how to enhance skills for effectively interacting with others.

PSY123
HUMAN GROWTH AND DEVELOP 3 3
A study of normal physical, mental, emotional and social development and changes in the development of the individual from prenatal to old age.

PSY124
PSYCHOLOGY OF WORK 3 3
Drawing from a wide range of psychological theories, principles and research, this course emphasizes personal and interpersonal skill-building beneficial to the prospective professional. Topics include learning and memory; perception; motivation and leadership; group dynamics and team-building; problem-solving and conflict resolution; communications; and stress management.

PSY125
CHILD DEVELOPMENT 3 3
Pre-Req: PSY121
A detailed examination of growth and maturation from infant/toddler through the preschool years up to the age of eight, with some treatment of selected topics relating to later stages. Physical, cognitive, affective, social, moral/ethical, and personality development are studied. Ten field observation hours are required.

PSY127
GROUP PROCESSES 4 4
Group theory, structure and interaction are explored, with emphasis on personal insight into how the individual is affected by and influences the group process. Facilitation of team-building, group life stages and factors that impede/enhance group effectiveness are examined. An experiential format requires application of course principles to group activities.

PSY221
ABNORMAL PSYCHOLOGY 3 3
Pre-Req: PSY121
An overview of the range of human behavior, emphasizing current distinctions between normal and abnormal. Explores historical and contemporary cause-and-effect models with focus on current diagnostic and statistical criteria, as well as treatment approaches and related issues.

PSY222
PSY ASPECT OF THERAPY 3 3
Covers the general principles of interaction with a specific focus on those unique challenges confronting the patient and the health care provider. Attention is given to the psychosocial needs of both the patient and the health care provider. Issues of communication, patient-provider relationships, patient dependency, personal values, and relating to people from differing cultures, ages, and special needs are discussed.

Physical Therapist Assistant

	Credit Hours	Contact Hours

PTA121
FUNDAMENTALS OF PT 4 5
Co-Req: BIO123 or BIO122
The student is introduced to the field of physical therapy, basic standards of practice, current professional issues and interaction with patients and other health professionals. The student is instructed in monitoring vital signs, infection control procedures, principles of body mechanics, patient positioning and draping, transfer techniques, range of motion, girth measurements, therapeutic massage and selected conditions and treatments. Laboratory activities, written assignments, and competencies are required components of this course.

PTA122
MUSCULOSKELTAL ANATOMY 4 5
Co-Req: BIO123 or BIO122
An in-depth study of the musculoskeletal system including: anatomical terms, bone and bony landmark locations; articulations: skeletal muscle locations and actions; the actions and planes of movement available at the joints; and the types of muscle contractions which can occur at the synovial joints. A basic study of skin is presented. Laboratory activities, cadaver studies and practicals are a required component of this course.

PTA123
KINESIOLOGY 4 5
Pre-Req: PHY101, PTA122, PTA221
The study of human anatomy emphasizing the biomechanics, motion and peripheral innervations of the musculoskeletal system as a basis for understanding normal and abnormal function and the development of exercise and gait programs. The fundamentals of posture, muscle physiology, muscle function, gait analysis and strength will be covered. Students will review muscle locations and actions, as well as locations and functions of selected ligaments, the intrinsic muscles of the hands and feet, and the innervations of the muscles of the extremities. Laboratory activities, cadaver studies and practicals are a required component of this course.

PTA124
MST PROCEDURES FOR PTA 2 3
Pre-Req: PTA123, PTA221
The student will learn data collecting and documentation for therapeutic measurement skills including goniometry and manual muscle testing.

PTA125
PROF CLIN PRACT FOR PTA 1 1
Pre-Req: PTA123, PTA124, PTA221, PTA123
This course will focus on development of the professional clinical skills including critical thinking and clinical decision-making. The students will apply didactic concepts learned in Fundamentals of Physical Therapy and PTA Procedures I to clinical situations.

PTA221
PTA PROCEDURES I 5 7
Pre-Req: PTA122
Co-Req: PTA123
This course will present to the students a comprehensive study of pain and its management; a study of the impairments, disabilities and functional limitations associated with burns, tissue repair, and pulmonary conditions; principles of physical agents/modalities usage including rationale, effects, adverse effects, contraindications, precautions, application, and documentation. Laboratory activities, written assignments, and competencies are required components of this course. Student may perform selected therapeutic interventions with patients under direct PT/PTA supervision as part of the laboratory components of this course.

Credit Hours | Contact Hours

PTA222
PTA PROCEDURES II **5** **7**
Pre-Req: BIO124, PTA124, PTA125
Co-Reg: PTA228, PTA229
This course will present to the students the impairments, disabilities, functional limitations, and interventions of selected musculoskeletal, rhematological and cardiovascular conditions including spinal disorders and amputation. Also included, will be an overview of CNS anatomy, physiology, and pathology, sensory integration, motor development and motor control. Laboratory activities, written assignments and competencies, are required components of this course. Students will perform selected therapeutic interventions with patients under direct PT/PTA supervision as part of laboratory component of this course.

PTA223
PTA PROCEDURES III **2** **3**
Pre-Req: PTA222
This course will present to the students the impairments, disabilities, functional limitations, and interventions of selected neuromuscular disorders and will include, but not limited to spinal cord injuries, traumatic brain injuries, strokes, and developmental disabilities. Laboratory activities, written assignments, and competencies are required components of this course. Students will perform selected therapeutic interventions with patients under direct PT/PTA supervision as part of the laboratory component of this course.

PTA226
FUNCTIONAL ANATOMY **4** **5**
Pre-Req: BIO123 or BIO122
An in-depth study of the musculoskeletal system with particular attention paid to the movement of joints, motions of the spine and extremities, as well as prime movers involved in these motions. Application of the knowledge of human anatomy with emphasis on biomechanics and functions relative to the neuromusculoskeletal system. Motion of the human body is studied as a basis for therapeutic exercise and function.

PTA227
DIRECTED PRACTICE III **3** **15**
Selected clinical experience in various physical therapy settings under direct supervision. Grading: Credit/Fail.

PTA228
SEMINAR I **2** **2**
Pre-Req: PTA124, PTA125
Co-Req: PTA222, PTA229
Presentation of topics related to clinical practice to include ethics and professional development.

PTA229
DIRECTED PRACTICE I **3** **16**
Pre-Req: PTA124, PTA125, PTA222, PTA228
Clinical experience in various physical therapy departments under direct supervision. Grading: Credit/Fail.

PTA230
SEMINAR II **1** **1**
Pre-Req: PTA222, PTA228, PTA229
Presentation of diverse clinical issues and approaches to patient management.

PTA231
DIRECTED PRACTICE II **2** **10**
Pre-Req: PTA229
Clinical experience in various physical therapy departments under direct supervision. Grading: Credit/Fail.

Respiratory Care Technology

Credit Hours | Contact Hours

RCT121
INTRODUCTION TO RC PROCEDURES **3** **4**
An introduction to the field of respiratory care: the job functions of the respiratory therapy profession; orientation to charting techniques; patient positioning; vital sign assessment; cleaning and sterilization; isolation techniques; and other procedures required for entry into the hospital setting.

RCT122
MED GAS ADMINISTRATION **3** **4**
An introduction to the basics of oxygen administration, aerosol and humidification therapy.

RCT123
AIRWAY MANAGEMENT PROCED **3** **4**
Pre-Req: RCT121, RCT122
An introduction to the therapeutic modalities used in the treatment of pulmonary disease to include: aerosol therapy, intermittent positive pressure breathing, postural drainage and percussion and the maintenance of a clear airway.

RCT124
PHARMACOLOGY FOR RT **2** **2**
Pre-Req: BIO123, RCT121, RCT122, RCT123
An orientation to general pharmacology including drug groups, dosage, effects and dispensing regulations. Emphasis is placed on those drugs used in the treatment and management of cardiopulmonary disease to include: bronchodilators, mucokinetics, steroids and other drugs.

RCT125
CLINICAL PRACTICE BP/SEM **3** **17**
Pre-Req: RCT121,RCT122
Hospital-acquired experiences consisting of the practical application of principles presented in Intro to Respiratory Care Procedures. Experiences provided include an introduction to basic patient care skills such as: medical asepsis, vital sign monitoring, charting procedures, isolation and resuscitation. Also included are experiences in medical gas administration, aerosol therapy and intermittent positive pressure breathing therapy.

RCT126
INTRODUCTION TO CRITICAL CARE **3** **4**
Pre-Req: RCT123, RCT124
An orientation to the principles related to the care of the critically ill patient with an emphasis on mechanical ventilation.

RCT127
CARDIOPULMONARY A AND P **3** **3**
Pre-Req: BIO123, RCT123, RCT124
An orientation to the anatomy and physiology of the respiratory system and the cardiac system.

RCT128
CLIN PRACT-AIRW MGT/SEM **2** **9**
Pre-Req: RCT123, RCT124, RCT125
Hospital-acquired experiences consisting of a practical application of the principles covered in airway management. Experiences are provided in the area of airway management, spontaneous aerosol therapy, intermittent positive pressure breathing therapy, postural drainage and percussion, tracheobronchial suctioning, as well as the principles and practices presented in Clinical Practice - Basic Procedures.

RCT221
ADVANCE RT PROCEDURES **3** **4**
Pre-Req: RCT126, RCT127
An orientation to pulmonary function tests, pulmonary rehabilitation, and respiratory care principles and practices related to the care of neonate and pediatric patients, including a review of the cardiopulmonary diseases affecting the neonate and the pediatric patient.

RCT222
RESPIRATORY DISEASES 3 3
Pre-Req: RCT124, RCT127
A review of diseases affecting the patients that are encountered by the respiratory care practitioner. Included is the physical assessment and evaluation of the patient with respiratory complications.

RCT223
PAT ASSMNST AND MONITOR 3 3
Pre-Req: RCT221, RCT222
Exposure to various procedures and techniques associated with the monitoring and evaluation of the patient with cardiopulmonary disease.

RCT224
CLIN PRAC CRIT CARE/SEM 3 17
Pre-Req: RCT124, RCT126, RCT127, RCT128
Hospital-acquired experiences consisting of the practical application of the principles presented in Introduction to Critical Care. Experiences provided include an exposure to ventilatory management, arterial punctures and other procedures related to the critically ill patient.

RCT225
CLIN PRACT SPEC ROT/SEM 5 25
Pre-Req: RCT127, RCT221, RCT222, RCT224
Hospital-acquired experiences consisting of the practical application of the principles covered in previous clinical practice courses and in advanced respiratory care procedures. Experiences provided include exposure to the management of the critically ill adult patient and the newborn and/or pediatric patient, pulmonary function testing and endotracheal intubation. Seminar: Exposure to the various credentialing examinations required of a registered respiratory therapist. Students are provided with practice on the entry level examination, written registry examination, and the clinical simulation examination. The student is required to successfully complete each of these practice examinations prior to graduation from the program.

Social Sciences

SOC121
SOCIOLOGY 3 3
Introduces the general theories of the field and research methods. Students will examine the impact of culture, social interaction, social structure, socialization, and social institutions on social behavior.

SOC122
SOCIETY AND TECHNOLOGY 3 3
An examination of the consequences of technological change on social organizations, cultural values and social institutions, and the response or adaptation of social systems to this change. Includes an assessment of the social problems of a technological age as seen through current events.

SOC123
DYNAMICS OF THE FAMILY 3 3
Explores various social and psychological approaches to family analysis, with emphasis on the family as a system. The transformation of the structure and function of the family from the traditional family to a more diverse definition of family is examined in relationship to changing roles and life issues.

SOC124
US SOCIAL SYSTEMS 3 3
Pre-Req: SOC121
Explores the nature and types of organizations and how they are expressed in social systems in American life. Topics discussed include organizational structure, power and authority, communications, inter-organizational relationships and bureaucracy.

Credit Hours | Contact Hours

SOC125
INTRODUCTION TO GERONTOLOGY 3 3
Presents a basic understanding of the historical, cultural, biological, physiological, psychological, and social contexts of aging. Addresses the changes that occur within the aging individual, how these changes influence interactions with social and physical environments, and how the older person, in turn, is affected by these interactions. Includes a discussion of age-related changes in anatomy and physiology, socialization, personality, intelligence, sensation, social support, economics and retirement, death and dying, and crime and fraud.

SOC126
PSYCHOSOCIAL ASPECT AGING 3 3
Examines the process of aging from individual and societal perspectives. Uses a psychosocial approach to discuss the images of growing old, created by individual and institutional structures of society, as well as the myriad of patterns in inequality of gender, race and economics that are compounded in old age. Topics include speed of behavior, mental functioning, mental disorders, socialization, social support, economics and retirement, leisure activities, living arrangement and death and dying.

SOC221
SOCIAL PROBLEMS 3 3
Pre-Req: SOC121
An examination of significant contemporary problems in American society and their impact on traditional and emerging sociological institutions/systems. Special consideration is given to these topics as they apply to social service agencies.

SOC222
JUVENILE DELINQUENCY 3 3
Pre-Req: SOC121
Introduces students to the nature and causes of juvenile delinquency. Major theories proposed as explanations of juvenile delinquent behavior are reviewed and evaluated. Students will have an opportunity to gain an understanding of the life experiences leading up to juvenile delinquent behavior, to the external and internal influences on the juvenile delinquent and to the choices that lead to a life of crime. Topics such as status offenses, substance use and abuse, street crime and gang membership will be discussed. Preventive strategies, community-based corrections and institutions for juveniles will be reviewed.

SOC225
CULTURAL DIVERSITY 3 3
Provide students with an understanding of the cultural diversity of our changing society. Students will examine and discuss the diverse values and characteristics of ethnic and minority populations and how those values influence society, social and economic processes, and race relations.

SOC227
SOCIAL SERV FOR ELDERLY 3 3
Presents information on national, state and local social services that meet the needs of the elderly, their families, their communities and the institutions serving them and their relatives. Includes an examination of current societal policy and programs to meet the needs of the elderly and a basic orientation to the roles of various personnel in agencies.

Human and Social Service Technology

SWK121
INTRODUCTION TO SOCIAL WELFARE — Credit Hours: 3, Contact Hours: 3

Provides an overview of the social welfare system spanning the last two hundred years. The dynamics of the various social, political, and philosophical ideas are examined as they have affected the social welfare system in the United States and social work as a profession.

SWK124
METHODS IN PRACTICE I — Credit Hours: 3, Contact Hours: 3
Pre-Req: SWK121

Fosters development of focused and group interviewing skills and examines principles and practices relating to the entire case management process. Assessment and documentation cover a diverse range of professional human and social service settings, emphasizing compliance to professional and governmental standards.

SWK125
SUBSTANCE ABUSE — Credit Hours: 3, Contact Hours: 3

Examination of the impact of alcohol and drugs on American society and the role of the social service professional in educating, supporting and assisting clients with treatment options/resources. Topics include common stereotypes, myths, attitudes, interventions, treatment options and co-dependency.

SWK126
HUMAN BEHAVIOR AND SOC ENV — Credit Hours: 3, Contact Hours: 3

Provides a comprehensive study of human behavior from a life span perspective. A systems approach is used with special attention to the role of the social service professional and the social service system.

SWK127
GROUP PROCESSES — Credit Hours: 4, Contact Hours: 4

Group theory, structure and interaction are explored, with emphasis on personal insight into how the individual is affected by and influences the group process. Facilitation of team-building, group life stages and factors that impede/enhance group effectiveness are examined. An experiential format requires application of course principles to group activities.

SWK128
INTRODUCTION TO GERONTOLOGY — Credit Hours: 3, Contact Hours: 3

Presents a basic understanding of the historical, cultural, biological, physiological, psychological and social contexts of aging. Addresses the changes that occur within the aging individual, how these changes influence interactions with social and physical environments, and how the older person, in turn, is affected by these interactions. Includes a discussion of age-related changes in anatomy and physiology, socialization, personality, intelligence, sensation, social support, economics and retirement, death and dying, and crime and fraud.

SWK129
PSYCHOSOCIAL ASPECT AGIN — Credit Hours: 3, Contact Hours: 3

Examines the process of aging from individual and societal perspectives. Uses a psychosocial approach to discuss the images of growing old, created by individual and institutional structures of society, as well as the myriad of patterns in inequality of gender, race, and economics that are compounded in old age. Topics include speed of behavior, mental functioning, mental disorders, socialization, social support, economics and retirement, leisure activities, living arrangements and death and dying.

SWK130
METHODS IN PRACTICE II — Credit Hours: 3, Contact Hours: 3
Pre-Req: SWK124

Focuses on the assessment and documentation processes practiced in a diverse range of human and social services settings. Students will apply the theory and practice skills from Methods I through exercises using focused and group interviewing skills. Students will apply documentation skills using traditional written case notes and computer based formats.

SWK224
POVERTY IN THE US — Credit Hours: 3, Contact Hours: 3
Pre-Req: SOC121 or SWK121

An examination of the historical, social, cultural, organizational and political factors related to poverty in the U.S. and their impact on social service programs. Social and personal dimensions of life and poverty in urban and rural areas will be discussed.

SWK225
VICTIM AND CRISIS INTERVENTION — Credit Hours: 3, Contact Hours: 3

Course provides students with the basic understanding of victimization and theories and practice of intervention. Issues such as risk factors, legal issues, intervention strategies of child abuse, spousal abuse, elder abuse and co-dependency will be introduced.

SWK226
SOCIAL SERVICE LAW — Credit Hours: 3, Contact Hours: 3

Comparisons of the theoretical basis of social work and law. Basic terminology, principles, organization and procedures of law will be explored along with the relationships of the two professions-law and social work.

SWK227
SOCIAL SERVICE PRACTICUM — Credit Hours: 2, Contact Hours: 14
Pre-Req: SWK228

Individual placement in selected human and social service agencies for educationally-supervised work experience. Students will be required to develop a practicum plan and maintain a log/notebook of the practicum experience.

SWK228
PRACTICUM SEMINAR — Credit Hours: 1, Contact Hours: 1
Pre-Req: SWK227

Review and discussion of experiences and issues encountered in the Social Service Practicum. Survey of career opportunities in the field of human and social service. Taken concurrently with the Social Service Practicum.

SWK230
SOCIAL SERV FOR ELDERLY — Credit Hours: 3, Contact Hours: 3

Presents information on national, state, and local social services that meet the needs of the elderly, their families, their communities and the institutions serving them and their relatives. Includes an examination of current societal policy and programs to meet the needs of the elderly and a basic orientation to the roles of various personnel in agencies.

Tentative Academic Calendars

2007-2008 ACADEMIC YEAR

Summer Session 2007

All sessions begin	June 4
First five-week session ends	July 7
Second five-week session begins	July 9
Eight-week session ends	July 28
Second five-week session ends	August 11
Holiday	
Independence Day	July 4

Fall Semester 2007

Classes Begin	August 27
Last Day of Classes	December 10
Exam Week	December 11 - 15
Holidays	
Labor Day	September 3
Columbus Day	October 8
Thanksgiving	November 22, 23

(Sat., Nov. 24, - Building Closed/No Classes)

Spring Semester 2008

Classes Begin	January 14
Last Day of Classes	May 3
Exam Week	May 5 - 8
Holidays	
Martin Luther King Day	January 21
Presidents' Day	February 18
Semester Break	March 17 - 22
Graduation/Commencement	May 18

2008-2009 ACADEMIC YEAR

Summer Session 2008

All sessions begin	June 2
First five-week session ends	July 6
Second five-week session begins	July 7
Eight-week session ends	July 27
Second five-week session ends	August 10
Holiday	
Independence Day	July 4

Fall Semester 2008

Classes Begin	August 25
Last Day of Classes	December 7
Exam Week	December 8 - 14
Holidays	
Labor Day	September 1
Columbus Day	October 13
Thanksgiving	November 27, 28

(Nov. 29 and 30 – Building Closed/No Classes)

Graduation/Commencement	January 11

Spring Semester 2009

Classes Begin	January 12
Last Day of Classes	May 3
Exam Week	May 4 - 10
Holidays	
Martin Luther King Day	January 19
Presidents' Day	February 16
Semester Break	March 16 - 22
Graduation/Commencement	May 17

2009-2010 ACADEMIC YEAR

Summer Session 2009

All sessions begin	June 1
First five-week session ends	July 2
Second five-week session begins	July 6
Eight-week session ends	July 26
Second five-week session ends	August 9
Holiday	
Independence Day	July 4th (Saturday)

(Building closed July 3, 4 and 5)

Fall Semester 2009

Classes Begin	August 24
Last Day of Classes	December 6
Exam Week	December 7 - 13
Holidays	
Labor Day	September 7th
Columbus Day	October 12th
Thanksgiving	November 26, 27

(Nov. 28 and 29 - Building Closed/No Classes)

Graduation/Commencement	January 10

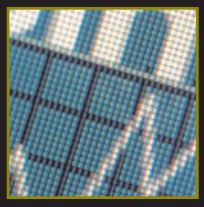
Spring Semester 2010

Classes Begin	January 11
Last Day of Classes	May 2
Exam Week	May 3 - 9
Holidays	
Martin Luther King Day	January 18
Presidents' Day	February 15
Semester Break	March 15 - 21
Graduation/Commencement	May 16

This tentative Academic Calendar is subject to change.
The most current Academic Calendars
are available at *www.starkstate.edu*.

Index

CATALOG 2007-2009



Business Technologies

Engineering Technologies

General Studies

Health Technologies

Information Technologies

Public Service Technologies

Stark State College Degree Programs

BUSINESS TECHNOLOGIES

Accounting Technology
- *Accounting Services for Health Administration Option*
- *CPA Option*
- *Computer Information Option*
- *Corporate Option*
- *Tax Option*

Administrative Information Technology
- *Management Option*

Automotive Technology
- *Comprehensive Automotive Program*
- *General Motors ASEP*

Business Management Technology
- *Business @ A Distance – Online Option*
- *Entrepreneurship Option*
- *Finance Option*
- *Health Services Option*
- *International Business Option*
- *KSU Stark - BBA Degree Option*
- *Small Business Option*
- *Tri-State University Transfer Option*

Financial Services Technology

Information Reporting Technology
- *Broadcast Captioning Option*
- *Judicial Reporting Option*
- *Realtime Transcription Option*
- *Scopist Option*

Legal Assisting Technology

Marketing Management Technology
- *E-Commerce Marketing Option*
- *Logistics Option*
- *Sales Option*

Operations Management Technology

ENGINEERING TECHNOLOGIES

Applied Industrial Technology

Civil Engineering Technology
- *Architectural Option*
- *Construction Management Option*
- *Surveying Option*

Design Engineering Technology

Electric Power Utility Technology
- *Line Worker Technician Option*
- *Substation Technician Option*

Electrical Engineering Technology
- *Electro-Mechanical Option*

Electrical Maintenance Technology

Electronic Engineering Technology

Environmental, Health and Safety Technology

Heating, Ventilation and Air Conditioning Technology

Mechanical Engineering Technology
- *Fuel Cell Technology Track*

Stark State College

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HEALTH TECHNOLOGIES

Dental Hygiene

Emergency Fire Services

Emergency Medical Services

Health Information Technology

Massage Therapy

Medical Assisting

Medical Instrument Sterilization

Medical Laboratory Technology

Nursing – ADN
- *RN Completion for LPN*

Occupational Therapy Assistant Technology

Physical Therapist Assistant Technology

Respiratory Care Technology

INFORMATION TECHNOLOGIES

Commercial Music Technology

Computer Engineering Technology

Computer Network Administration and Security Technology
- *CISCO Network Administration Option*
- *UNIX/LINUX Database Administration Option*

Computer Programming and Database Technology
- *Database Management Option*

Computer Science and Engineering Technology
- *Video Game Design Option*

Cyber Security and Computer Forensics Technology

Interactive Media Technology
- *Video Production Option*

Management Information Systems
- *Help Desk/Computer Support Specialist Option*
- *Medical Informatics Option*

Web Design and Development (E-Commerce) Technology

PUBLIC SERVICE TECHNOLOGIES

Early Childhood Education
- *Intervention Specialist Option*

Human and Social Service
- *Gerontology Option*

GENERAL STUDIES

Associate of Arts Degree
- *offered jointly with Kent State University*

Associate of Science Degree
- *offered jointly with Kent State University*

Associate of Technical Studies Degree

Biotechnology

Technical Communications

One-Year Certificates Approved by Ohio Board of Regents

- **Administrative Information Certificate**
- **Bookkeeping Certificate**
- **Computer Numerical Control (CNC) Technical Certificate**
- **Enrolled Agent Certificate**
- **Fundamental Payroll Certificate**
- **HVAC Certificate**
- **Massage Therapy Certificate**
- **Medical Coding Specialist Certificate**
- **Medical Instrument Sterilization Certificate**
- **Medical Transcription Certificate**
- **Paramedic Certificate**

Front cover fuel cell photo courtesy of Rolls-Royce Fuel Systems, Inc. (US)