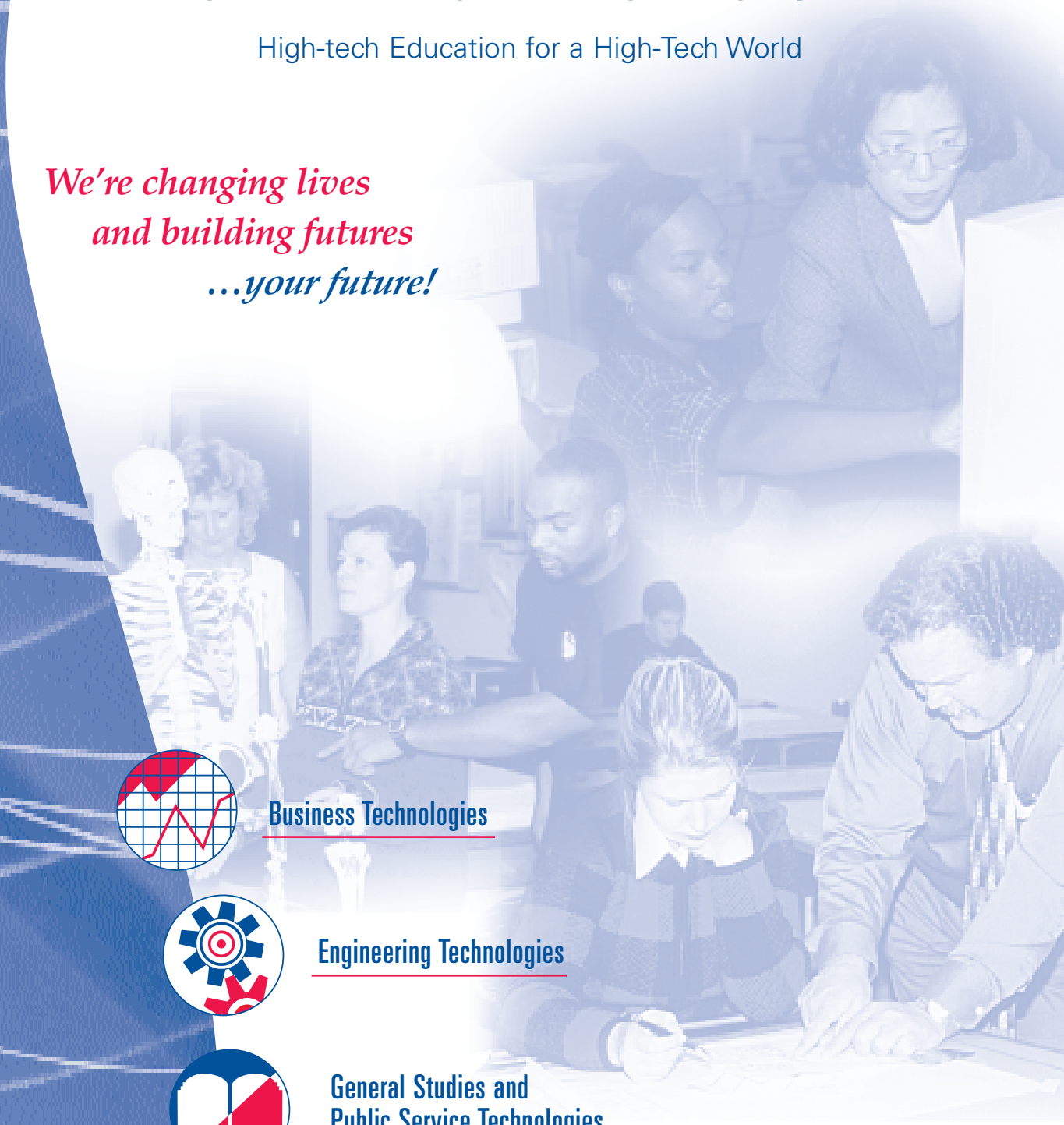
STARK STATE COLLEGE

OF TECHNOLOGY

High-tech Education for a High-Tech World

We're changing lives
and building futures
...your future!



Business Technologies

Engineering Technologies

General Studies and
Public Service Technologies

Health Technologies

CATALOG 2001-2003

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 head 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. Please 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
OF TECHNOLOGY

High-Tech Education for a High-Tech World

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

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

STARK STATE COLLEGE OF TECHNOLOGY

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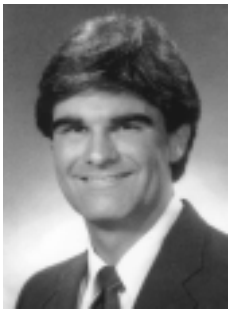

MICHAEL THOMAS, DDS.

Mission Statement

Stark State College of Technology provides accessible, quality associate degree programs, training and lifelong education in a diverse and supportive learning environment to foster success in a dynamic global economy.

Vision Statement

The vision of Stark State College of Technology is to be the premier college of technology, a key community partner and leader in education for the 21st century and beyond.

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President's Message

Dear Prospective Student:

The educational choices you make in life may be the driving force toward shaping your future. With the rapid changes in technology affecting almost every aspect of our personal and professional lives, it is imperative that everyone prepare for the technological challenges ahead. Your selection of Stark State College could mean the difference in preparing you for a future filled with promise and job security.

At Stark State College of Technology we are committed to providing the best education possible to meet the needs of a technologically sophisticated global economy. We do that by meeting the educational needs of our students, as well as meeting the demands for workforce training by our community. *At Stark State College, we're training the employees of today, as well as the employees of tomorrow.*

The rapid pace of technology in today's world is unprecedented in history. It took thousands of years to develop practical air travel. Once that happened, it took less than 70 years to go from that first flight at Kitty Hawk to landing on the moon. The computers of 50 years ago filled huge rooms, cost enormous amounts of money to operate and yet could barely perform the functions of today's low-cost, computers that we can now hold in our hands. High quality education and training must keep pace with this rapidly changing technology!

To achieve this quality of education and training, Stark State College faculty not only have excellent credentials and teaching skills, but also combine those qualities with professional experience in their fields of expertise. We equip our classrooms and laboratories with state-of-the-art equipment and we provide a wide array of support services to meet the needs of our diverse student population.

Our commitment to excellence will pay dividends for you in the future. Whether you choose to seek a certificate, an associate's degree or continue on for your bachelor's degree, you will have the advantage of a solid high-tech education that is relevant and marketable in today's high-tech world.

The administration, faculty and staff of Stark State College welcome you. We're excited about the future and the challenges that lie ahead, because at Stark State College *we're changing lives and building futures … your future!*

Sincerely,

John J. McGrath, Ed.D
President
Stark State College

Administrative Officers

Robert M. Hallier
Vice President for
Business and Finance

Elaine A. Pontillo, Ph.D.
Vice President for Instructional
and Corporate Services

John J. Kurtz
Vice President for
Information Technology
and Administrative
Services

Para M. Jones
Vice President for
Advancement and
Student Services

The College Profile

STARK STATE COLLEGE OF TECHNOLOGY

A Reputation For Excellence

HIGH-TECH EDUCATION FOR A HIGH-TECH WORLD

Stark State College of Technology (SSCT) is a state-assisted college of technology offering associate degree programs, 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, engineering, health 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, high tech education at affordable cost.

The College provides the competitive edge in today's high-tech world by enabling students to attain their educational goals with a full schedule of credit and continuing education classes. In addition, SSCT's division of corporate and community services provides customized contract training programs to area employers.

Stark State has earned a reputation for excellence among local businesses and industries. This reputation for excellence has helped SSCT become the largest college in Stark County – with more than 6,000 credit and 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.

EDUCATION BY THE COMMUNITY... FOR THE COMMUNITY

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

Many individual technologies are accredited and licensed by their professional accrediting associations and organizations.

Stark State College of Technology offers associate degree programs, one-year certificate programs and a variety of career enhancement courses in business, health, general studies/public service and engineering technologies. All programs are developed with input from local employers and professionals, who serve on advisory committees with the purpose of designing and updating curricula to meet the educational needs of the community.

Stark State's beautiful, well-equipped campus is conveniently located off of I-77 to serve students in Stark, Summit, Tuscarawas, Portage, Carroll, Holmes, Wayne, Medina and Columbiana counties. Because students commute to SSCT, they save money on living expenses.

SSCT provides access to education for students of all ages and backgrounds. 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.

Accreditations

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

General Studies/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*

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 recognized by the United States Department of Education:* Commission on Dental Accreditation, 211 E. Chicago Avenue, Chicago, IL 60611 • 312-440-4653

HEALTH INFORMATION TECHNOLOGY *The health information technology program is accredited by the Commission on the Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the American Health Information Management Association's Council on Accreditation:* CAAHEP, 35 E. Wacker Drive, Suite 1970, Chicago, IL 60601-2208 • 312-553-9355

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

MEDICAL ASSISTING *The Committee on Allied Health Education and Accreditation (CAAHEP) grants accreditation to programs in Medical Assisting upon recommendation of the Curriculum Review Board:* CAAHEP, 35 E. Wacker Drive, Suite 1970, Chicago, IL 60601-2208 • 800-228-2262

> **OPHTHALMOLOGY ASSISTANT** *Accredited by* Joint Commission on Allied Health Personnel in Ophthalmology/CAAHEP, 2025 Woodlane Drive St. Paul, MN 55125-2992 • 800-284-3937

MEDICAL LABORATORY TECHNOLOGY *Accredited by NAACLS (National Accrediting Agency or 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 • 703-706-3245

RESPIRATORY CARE TECHNOLOGY *The respiratory care technology program is accredited by the Committee on Accreditation for Respiratory Care:* Committee on Accreditation for Respiratory Care, 1248 Hardwood Road, Bedford, TX 76021-4244 • 817-283-2835

Engineering Technology Accreditations

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

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 • Telephone 410-347-7700 • www.abet.org

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 will be mailed upon request or can be picked up at the Office of Admissions/Student Services.

ADMISSION PROCEDURES

Credit classes begin each August. Applications, however, are accepted throughout the year. The following procedures should be followed:

1. Submit an application form, along with a non-refundable application fee of $35.00. An application form may be obtained at the College or from the high school guidance counselor.
2. Provide the Registration 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 reading, English and appropriate math inventories.
5. A personal interview may be requested in cases where other screening procedures do not provide sufficient information.
6. Students seeking admission to a health technology program must complete a separate health application.

After these steps have been completed, the application will be processed and the applicant will be notified of the results.

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. Grades of at least "C" quality must have been earned in any course to permit acceptance of credit. Transcripts are not automatically evaluated for transfer of credit. A specific request must be made with the Office of Admissions/Student Services for transcript evaluation prior to admission to the College.

INTERNATIONAL STUDENT ADMISSIONS

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

Area high school students enrolled in vocational and technical programs may qualify for advance placement at Stark State College of Technology. Please call our Office of Admissions/Student Services at 330-966-5450 for more information.

International students are only accepted at the beginning of the academic year, which begins in August. All admissions requirements must be completed by July 1 preceding the August in which the student desires to enroll.

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

1. • Proof of English language proficiency. A score of 500 or better on the Test of English as a Foreign Language (TOEFL) is considered adequate proof of language proficiency. This test is administered in major cities throughout the world. 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, off-campus housing, transportation and personal expenses while attending Stark State College; and
   • Proof of satisfactory completion of a program of education that is equivalent to high school in the United States. Any degree, diploma or certificate should be authenticated by a certified copy of the document and a translated copy if the original is not in English.
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.

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

Any person meeting the qualifications for admission to the College may enroll as a 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 Registration Office.

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. 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.

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 of academic major.
- class scheduling.
- continuous assessment and possible referral.

EARLY ALERT

Any student whose work is unsatisfactory (below "C" level) will receive an "early alert" letter from the Registration Office during the beginning of the sixth 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.

CENTER FOR ACCELERATED LEARNING (CAL)

Because everyone's learning style is different, Stark State College's Center for Accelerated Learning (CAL) lab provides a variety of services to meet the learning needs of each student: one-on-one tutoring, group tutoring and computer assisted learning. Students select the learning service that best satisfies their needs.

CAL provides tutoring assistance in specific coursework and helps students improve learning and study skills. CAL helps you discover new approaches to learning; overcome test anxiety; use relaxation techniques; and discover what study techniques work best for you.

LEARNING SUPPORT SERVICES

Learning support services 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. The following services are offered:

Personal Growth Seminars

Each semester, a calendar is available to Stark State students and employees that announces seminars to be offered. All seminars are free and provide participants with information or skills that will assist them with their academic success.

Adult Learner Workshops

The adult learner workshops are free sessions available each semester and are designed to assist adults in overcoming anxieties associated with returning to an academic environment. Facilitators give assistance with the admissions process as well as with resolving barriers while making the transition to college.

Displaced Homemakers

The displaced homemaker program offers assistance with the College admission process, enrollment, and tuition support for credit and continuing education courses. To qualify, a student must be widowed, separated, divorced, married to a disabled person, or a single parent. Participants must complete the free transition workshops offered at the College.

The Success Link

Students and SSCT employees may receive free short-term counseling services through the Success Link office. Facilitators provide individual counseling, crisis intervention, and support groups for issues which affect academic and professional success. Information of specific personal needs is addressed in special-topic focus groups throughout the year.

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

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 Office of Admissions/Student Services.

CREDIT BY EXAMINATION (PROFICIENCY TESTING)

A student 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.

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.

REPEATING A COURSE

If a student repeats a course, the first grade received remains on the student's record. However, the second grade received is the grade of record used to determine the semester and cumulative grade point average.

EARLY COLLEGE ADMISSION POLICY

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 coursework, 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.

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.

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 *Procedures and Regulations* as adopted by the Board of Trustees of Stark State College.

PROCEDURE TO INSPECT AND REVIEW RECORDS

A student may request, in writing, the opportunity to inspect and review his/her records. The request should be made to the registrar and must specify records to be inspected and reviewed. A request by a student to inspect and review his/her records 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 his/her designee. Records may not be changed or deleted during the process of inspection and review. The student shall be advised of his/her right to challenge and the procedure to challenge any portion(s) of his/her college record. Upon written request, the student shall be provided with a copy of that portion(s) of his/her 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 *Procedures and Regulations* 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.

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.

STUDENT RESPONSIBILITY

Each student is responsible for complying with the regulations in this catalog and with other regulations of the College. Class schedule information is a supplement to the College catalog and is also an official statement of policy.

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 Admissons/ Student Services Office.

GRADE APPEAL PROCEDURE

Students who wish to appeal a grade must initiate the process within 15 school days of the beginning of the term immediately following receipt of the grade. 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 Office.

CIVIL RIGHTS COMPLIANCE COORDINATOR

The dean of 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.

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.

Copies of the complete set of *Computer Lab Usage Guidelines* are available from the Office of Admissions/Student Services or from the staff of any of the computer labs.

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. Copies of the detailed *Grievance Procedure for Complaints Concerning Discrimination* are available to students upon request in the Office of Admissions/Student Services.

STUDENT DIRECTORY INFORMATION

The following categories of information have been designated as directory information: name; address; telephone number; major; and academic honors. The College will consider it acceptable to release this information without specific prior written student consent unless written notice is made to the Registration Office that any or all of the information designated should not be released without the student's prior consent.

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, please check with the campus Security Office (Room S103).

STUDENT SUBSTANCE ABUSE AND PREVENTION POLICY FOR STUDENTS

Details regarding the policy are in the *Student Handbook*.

ATTENDANCE POLICY STATEMENT

The federal government now requires that colleges and universities monitor attendance. This is necessary in order to document that students are eligible for the federal funds they receive. The federal government mandates that non-attendees be dropped or withdrawn and federal monies be refunded accordingly. Therefore, Stark State monitors class attendance for ***all*** students since it is not obvious which students receive federal funds. Students not in attendance of their classes risk being dropped or withdrawn from courses and having any financial aid cancelled or reduced.

Student Services

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

CAREER PLANNING SERVICES

The Career Center is located in the Career Services Office in the Student Center. The Career Center offers free career workshops during the year for students and/or anyone in the community who is undecided about career choices. The goal of the workshop is to help a person select a career field that is realistic, marketable and adaptable.

Other career material such as an employer information file, video cassettes, software, books and pamphlets, all directed to career investigation and the job search, is available for student use in the Career Center. For information on career workshops call the Career Center at 330-966-5459.

PLACEMENT SERVICES

Placement services are offered to graduates and alumni who are seeking employment. A resume referral service is available to employers who have individual positions open. Employers are also encouraged to interview potential candidates on campus during the recruiting season. Potential graduates and alumni are encouraged to register with the resume referral service.

For current students, a job bulletin board is available which displays part-time and full-time student jobs.

The Career Services Office administers two work-based learning programs for sophomore students in the business and engineering technology divisions.

- Cooperative education (academic based) – Refer to the academic policies and procedures section of this catalog for more information on the co-op program. (Page 26).
- Professional work experience – This program is a college-level program designed to provide outside professional on-the-job work experience without in-class academic requirements.

  Professional work experience is provided as a non-academic option to the cooperative education program. Students opting for this program would not register for credit. Working arrangements, compensation and job requirements would be agreed to by the student and employer.

For more information on either of these programs, contact the Stark State Career Center at 330-966-5459.

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. Please contact the Office of Admissions/Student Services at 330-966-5450.

STUDENTS WITH DISABILITIES

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. Please call the Office of Admissions/Student Services at 330-966-5451 (voice or TDD) for information or to schedule an interview.

MULTICULTURAL SERVICES

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 SSCT and beyond. The counselor for minority recruitment and retention 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 SSCT offices.

Other support activities include:

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

To schedule an appointment, please call the Office of Admissions/Student Services at 330-966-5450.

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. It should be noted that many family insurance plans do not cover children over the ages of 18 or 19. Information is available at the Cashier's Office.

TUTORING SERVICE

Successful completion of any college curriculum requires a mastery of the fundamental mathematics and language skills, as well as basic study skills. Yet, many college students lack proficiency in one or more essential areas. Stark State College will provide tutoring service at a minimal charge to students who need additional help to maintain a satisfactory average. These services are offered by the developmental educational department.

FINANCIAL AID

The Financial Aid Office provides assistance with financial aid applications and filing dates, estimation of cost and needs analysis and information concerning scholarships, grants-in-aid, federal and state financial assistance programs and part-time employment.

Every student should have a sound plan for acquiring a college education, including financial arrangements, worked out well in advance. It is advisable for a student in need of financial assistance to discuss his/her situation personally with a financial aid specialist as early as possible.

Student Activities/Facilities

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: inter-club council, intramural athletics, student clubs and other worthwhile and interesting events.

ORIENTATION

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

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 1.1 million alumni and more than 1,000 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 grade point average of 3.75 or higher in at least 16 hours of degree-related courses. To continue membership, a student must maintain a 3.5 GPA. The initial $45 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.

STUDENT ORGANIZATIONS

An elected inter-club council plans and coordinates extracurricular programs and social affairs for students.

The inter-club council assists the College faculty and administration in making rules and regulations by providing student opinion and advice.

SOCIAL ACTIVITIES

Stark State College offers students a wide variety of activities. Student clubs include: American Association of Mechanical Engineers, Association for Medical Laboratory Technicians (AMLT), Association of Medical Records Students (AMReS), Institute of Electrical and Electronic Engineers (IEEE), Institute of Management Accountants (IMA), Inter Club Council (ICC), International Club, Math Club, Minority Awareness Association (MAA), *Student Informer*, Ski Club, Society of Women Engineers (SWE), Stark State College Alumni Association, Stark State College Association of Medical Assisting, Stark State College Collegiate Secretaries International, Association of Information Technology Professionals, Society of Manufacturing Engineers, American Society of Civil Engineers, American Society of Highway Engineers, Stark State College Human Services Technology Student Club, Student Nurse Association-Stark State College (SNA-SSC), Student Occupation Therapy Assistants Club (SOTA), Student Physical Therapist Assistant Club (SPTA) and other clubs associated with professional organizations.

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, 7:30 a.m. to 5 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. Pre-registration forms are available from the Office of Admissions/Student Services or phone the preschool at 330-499-0909.

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. 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. Please 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.

DENTAL HYGIENE CLINIC

As part of the dental hygiene degree program, Stark State College operates a Dental Hygiene Clinic that provides a full range of preventive services, including dental examinations, cleaning and polishing of teeth, oral health instruction, x-rays, fluoride treatments, sealants and more.

The Dental Hygiene Clinic has 10 state-of-the-art operatory stations equipped with the latest dental hygiene technology. The clinical experience is a key element of our dental hygiene degree program. All students work under the direction of licensed dental professionals to ensure the quality of services and the comfort of our clinic patients.

Free parking for clinic patients is available adjacent to the clinic entrance. To schedule an appointment or for more information about dental hygiene services, call 330-305-6610. For information about the dental hygiene degree program, call the Office of Admissions/Student Services at 330-966-5450.

Associate of Technical Studies Degree

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 asadditional 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 heads and the major division chairperson will work out the program of study with the student. Final approval will be granted by the vice president for instructional and corporate services.

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 area of specialization can be formed either by:

(1) a combination of technical courses selected from technical programs offered by the College to serve the educational needs of the individual that are not addressed by a program currently being offered, or by

(2) courses or training received from another post secondary institution, vocational center or institution that is judged to be of college level and for which the College awards degree credit to a maximum of 30 semester credit hours, and

(3) students are encouraged to take 3-5 credit hours from the interdisciplinary studies (IDS) sequence.

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

Applications for this degree are available in the Office of Admissions/Student Services.

The College also has a non-traditional program called "experiential learning" to help people get college credit for their professional experience in business, industry and the community and enable them to begin working toward an associate degree. For information, please call the Office of Admissions/Student Services at 330-966-5450.

ADVISORY COMMITTEES

Each of the technology programs at Stark State is developed and kept current through the efforts of advisory committees. Comprised of outside leaders in that particular field, members of advisory committees share their expertise and experience with College faculty and staff to help keep the curricula current and relevant. Every degree program seeks the guidance of its advisory committee whenever a new program is developed and when an existing program needs to be modified or updated. By integrating the direction of our advisory committees, Stark State College assures that the education they receive is current, relevant and independently validated.

The Stark County Tech Prep Program

As we enter the 21st century, our state and national economies will need many more highly skilled technical workers. These important, good-paying jobs will require more than a high school education, but less than a bachelor's degree. This means that many more young Americans will need to prepare to go to college – and particularly into the technical programs that lead to an associate's degree.

Tech Prep is a new way of doing business in our high schools and technical colleges. The goal is to prepare young people for the growing number of technical jobs in the future. Tech Prep high school students

- learn college preparatory academics in applied, real-world contexts that make the content more meaningful and accessible to them;
- develop technological literacy, including the "new basics" of computer usage; and
- in 11th and 12th grade, immerse themselves in the foundation occupational skills needed to enter and succeed in an associate degree program.

At the end of high school, Tech Prep graduates are ready to choose a technical major and enter an advanced skills technical associate degree program at a community or technical college. Alternatively, they can enter the world of work with an array of stronger basic and occupational skills than graduates of general education programs.

In our area, the Stark County Tech Prep Consortium partners Stark State College of Technology with all public school districts in Stark County. The Consortium, which originated in 1992 with a federal Tech Prep grant, is a dynamic initiative that continues to evolve and grow in terms of its district partnerships and scope of programming.

In 1995, the Consortium was the recipient of the prestigious "Ohio's BEST Practices" award, sponsored by the Ohio Business Roundtable. The goal of Ohio's "BEST" is to search out exemplary, innovative education programs with proven success and share their stories with education stakeholders statewide.

In 1999, the Consortium was the National Tech Prep Network's (NTPN) Exemplary Worksite Learning Award first place winner in the nation. The Consortium was recognized for excellence in the areas of program overview, professional development, business involvement and results.

Stark County's Tech Prep program is a partnership among students, parents, Stark County high schools, Stark State College, labor, local businesses and industries. The Consortium has implemented the following programs:

E-Commerce/Marketing

- GlenOak Career Center and Massillon Washington High School.

Engineering Technologies

- Automotive engineering technologies at Jackson High School and Timken High School
- Electrical/electronic engineering technologies at Perry High School
- Engineering technologies at GlenOak Career Center
- Heating, ventilation, air conditioning/refrigeration at R.G. Drage Career Center
- Light and sound production engineering at GlenOak Career Center

Fire Science/Emergency Medical Service Technololgies

- GlenOak Career Center and Stark State College of Technology

Health Technologies

- GlenOak Career Center, Perry High School and Timken High School

Information Technologies

- Business computer technologies at R.G. Drage Career Center
- Computer network engineering and telecommunications at Massillon Washington High School
- Computer network technologies at R.G. Drage Career Center
- Information technologies at Canton South High School and East Canton High School

Interactive Media Technologies

- GlenOak Career Center, Massillon Washington High School, and Sandy Valley High School

Additional programs are currently being developed and will be available in the near future.

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 special consideration for entry into specific programs or classes at Stark State College.

Financial Aid

Our goal is to provide financial assistance to students who otherwise could not afford to attend college. The Financial Aid Office is staffed with experienced professionals who can assist students in analyzing their particular situation and determining the appropriate avenue for financial assistance.

All students are advised to complete the following steps when applying for financial aid:

1. Apply for admission. This enables us to establish a computer file for you.
2. Obtain the financial aid packet from our Financial Aid Office.
3. Complete the free *Application for Federal Student Aid* (FAFSA), and the Stark State College *Institutional Financial Aid Form* (IF) by May prior to the fall semester for which you are enrolling.
4. If you are transferring from another college, your financial aid available at Stark State may be limited.
5. Respond quickly to any request for additional information from our Financial Aid Office.
6. You will receive a Financial Aid notification from the Financial Aid Office, indicating the amount of aid you are eligible to receive. If you are eligible for a loan, you will receive a loan application with the notification.
7. If you decide to accept a loan, the loan application must be completed and returned to the Financial Aid Office.
8. First-time Stark State College loan recipients must attend a loan counseling session prior to turning in their loan applications.

The major sources of aid are explained below.

FEDERAL PELL GRANT

The federal Pell grant is the largest federal grant program and is made available to students who demonstrate financial need. The grant is available to both full-time and part-time students. The application for the Pell grant is the FAFSA and the IF.

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (FSEOG)

The FSEOGs primary selection criterion is based on federal Pell eligibility. Funds are awarded on a first-come, first-served basis so students should apply early to be considered for these monies.

FEDERAL WORK STUDY PROGRAM (FWSP)

The federal work study program provides work opportunities for students who demonstrate financial need. Funds for the FWSP are provided through the cooperative efforts of the institution and the federal government. Eligibility for participation in this program is based on student need.

OHIO INSTRUCTIONAL GRANT (OIG)

The Ohio instructional grant offers financial aid to students who are within the state income guidelines, are full-time students and are enrolled as undergraduates in an eligible Ohio college. The amount of the award depends on family income and family size. The Ohio part-time state grant offers tuition assistance to residents enrolled less than full-time. Eligibility is determined the same as the OIG.

FEDERAL SUBSIDIZED STAFFORD LOAN

The subsidized Stafford Loan is made through a participating bank, credit union or other lending institution. The interest rate is variable not to exceed 8.25%. The student begins repayment six months following graduation or six months after the student is no longer enrolled in at least six credit hours. 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. These forms can be obtained from the Financial Aid Office.

FEDERAL UNSUBSIDIZED STAFFORD LOAN

This loan is not based on financial need and, therefore, is available to anyone who meets general eligibility requirements. Loan limits, deferments and interest rates are the same as the Stafford program; however, students pay interest during in-school and deferment periods. To apply, the student must complete a FAFSA, IF and Stafford Loan application. Forms can be obtained from the Financial Aid Office.

STARK STATE COLLEGE ACADEMIC SCHOLARSHIP

Each year all local high schools have a scholarship available to a graduating senior who demonstrates high academic performance and plans to attend Stark State College. The scholarship amount may vary, but it is intended to defray the entire cost of tuition for the freshman year. Applications are available at the high school guidance office or our Financial Aid Office. The deadline for filing is typically February 28 of the student's senior year.

TIMKEN SCHOLARSHIPS

Each year, the Financial Aid Office awards several scholarships from funds donated by the Timken Foundation. These scholarships are based on academic ability, financial need and application date.

ADDITIONAL SCHOLARSHIPS

The Financial Aid Office handles various scholarships available to students at different times throughout the year. A bulletin board outside the Financial Aid Office posts scholarships and application procedures as they become available.

VETERANS EDUCATIONAL BENEFITS

Stark State College is fully accredited under the laws that provide educational benefits for veterans. The Registration Office certifies veterans' eligibility.

OTHER SOURCES OF AID

Stark State College works closely with many local agencies to assist students in securing funds for college. The agencies include Workforce Investment Act (WIA), Bureau of Vocational Rehabilitation (BVR), Trade Readjustment Act (TRA), Displaced Homemakers, etc. For more information on any of these programs, contact the individual agency.

STUDENT INSTALLMENT PROGRAM (SIP)

Stark State College offers a student installment program (SIP) which allows a student to pay tuition and fees in three equal installments instead of one lump sum. There is a $15 application fee. This option will be offered automatically when the student registers for classes.

STANDARDS OF ACADEMIC PROGRESS

The Standards of *Academic Progress Policy* ensures that any student who applies for federal financial aid is making progress toward a degree. In order to maintain eligibility for aid, a student must meet the "standards requirements" listed below. 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" are: federal Pell grant; FSEOG; FWSP; Stafford Loan; and federal PLUS.

State funds are not affected by this policy. However, these rules apply even if aid was not being received at the time of infraction. Outlined below is an abbreviation of the policy. The complete policy is available at the Financial Aid Office.

STANDARDS REQUIREMENTS

1. Complete 67% of the credit hours attempted for the academic year. The credit hours a student is enrolled in on the morning of the fifth day of classes for each semester are added together. It is expected that the student should complete 67% of these credit hours. For example, if a student begins each of two semesters with 12 credit hours, the student must complete 16 hours (24 x 67%) with a grade of an A, B, C or D by the end of the academic year.
2. Students must successfully complete at least one of their attempted courses each semester.
3. An associate degree must be completed within 99 (semester equivalent) enrolled credit hours.
4. The student must maintain a cumulative GPA of at least 1.5 until 30 hours are completed, and a GPA of 2.0 thereafter.

Fees

Stark State College of Technology is committed to providing an excellent college education at the lowest possible cost to students. To keep tuition costs affordable, the College works hard to control costs and maintain efficiency. Below is the fee schedule effective summer semester 2001 which is merely intended to give students an estimate of tuition costs. Due to rising and uncompensated costs for providing educational services, Stark State College of Technology reserves the right to revise the current schedule of fees at any time and without prior notice. Please call the Office of Admissions/Student Services at 330-966-5450, for a current fee schedule.

FEE SCHEDULE *

Credit Hours	*Instructional Fee*	*General Fee*	*Total*
1	$ 76.25	$ 8.25	$ 84.50
2	152.50	16.50	169.00
3	228.75	24.75	253.50
4	305.00	33.00	338.00
5	381.25	41.25	422.50
6	457.50	49.50	507.00
7	533.75	57.75	591.50
8	610.00	66.00	676.00
9	686.25	74.25	760.50
10	762.50	82.50	845.00
11	838.75	90.75	929.50
12	915.00	99.00	1,014.00
13	991.25	107.25	1,098.50
14	1,067.50	115.50	1,183.00
15	1,143.75	123.75	1,267.50
16	1,220.00	132.00	1,352.00
17	1,296.25	140.25	1,436.50
18	1,372.50	148.50	1,521.00

19 hours or more – add an additional $84.50 per credit hour

	Ohio Resident
Application Fee ***(one-time, non-refundable charge)***	$ 35.00
Registration Fee	15.00
Locker Fee - Large	4.50 per semester
Locker Fee - Small	3.00 per semester
Credit by Examination Fee	30.00
Parking Decal Fee	20.00
Graduation Fee	35.00

Books, drawing instruments and other supplies are in addition to tuition fees. ***Stark State College of Technology reserves the right to revise the schedule of fees at any time without prior notice.***

****This fee schedule is for Ohio residents. Out-of-state students are assess a tuition surcharge of $30 per credit hour in addition to the in-state tuition.***

STUDENT INSTALLMENT PROGRAM (SIP)

This program is an alternative to the single payment of fees due at the beginning of each semester. For a $15 non-refundable fee, registered students pay one-third of their fees by the published fee payment deadline (deadline is published in the class schedule). The remaining balance is divided into two installments and is payable in approximately two 45-day increments. A brochure explaining the program in more detail is available in the Office of Admissions/Student Services.

OLDER CITIZENS

Citizens who are 60 years of age or older, and have paid the $35 application 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 noncredit continuing education courses, by presenting their Golden Buckeye Cards at the time of registraion. This discount applies to "in-person" registrations only and does not include special senior citizens classes or company-paid registrations.

LATE REGISTRATION

A registration fee of $15 will be charged to anyone registering and/or paying during open registration.

TRANSCRIPT FEE

An official copy of a student's record is issued upon written request 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.

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. The application fee, and all miscellaneous fees are not subject to refund.

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 fifth day of the semester - 100% refund.

(b) On the fifth 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 fifth day of the semester - 100% refund.

(b) On the fifth through the sixth day of the semester - 80% refund.

(c) On the seventh through the eleventh day of the semester - 60 % refund.

(d) On the twelfth through the thirteenth day of the semester - 40% refund.

(e) 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 fifth day of the semester - 100% refund.

(b) On the fifth day of the semester - 80% refund.

(c) On the sixth through the eighth day of the semester - 60% refund.

(d) On the ninth through the tenth day of the semester - 40% refund.

(e) 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 fifth day of the semester - 100% refund.

(b) On the fifth day of the semester - 60% refund.

(c) On the sixth day of the semester - 40% refund.

(d) 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.

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 your 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.

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.

Academic 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
IP	— In Progress	.0
NC	— No Credit	.0
NGR	— No Grade Reported	.0
W	— Withdrawn	.0
AUD	— Audit	.0
CR	— Credit	.0

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

$$\frac{\textbf{Total Quality Points Earned}}{\textbf{Total Units of Credit Attempted}} = \text{Grade-Point Average}$$

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) and four "Bs" (4 x 3 = 12 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 (4 pts.)	3	12
B (3 pts.)	12	36
	15	48

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

Grades are reported to the address provided by the student at the close of each semester. A student should consult periodically with the instructor to check his academic progress.

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.

CLASS ATTENDANCE

Regular and punctual attendance at all classes is expected of each student. The individual instructor has both the responsibility and the prerogative for managing student attendance.

Students anticipating absence(s) from class are responsible for contacting the instructor (s).

The federal government now requires that colleges and universities monitor attendance. This is necessary in order to document that students are eligible for the federal funds they receive. The federal government

mandates that non-attendees be dropped or withdrawn and federal monies be refunded accordingly. Therefore, Stark State monitors class attendance for ALL students since it is not obvious which students receive federal funds. Students not in attendance of their classes risk being dropped or withdrawn from courses and having any financial aid canceled or reduced.

WITHDRAWAL POLICY

Students may withdraw from a course or from the College during the first 14 calendar days of any academic period by completing the "change of course" form (including the instructor's signature) and processing it through the Cashier's Office and Registration Office. The form is available in the Registration Office. Changes made during this period will not become part of the student's transcript.

Through the same procedure, students may withdraw from a course or the College with a "W" grade from the 15th calendar day of classes through 75% of the course.

Requests to withdraw with a "W" grade beyond the deadline date through the end of the last class meeting of the course must be presented to the instructor and the department head. Only cases involving emergency or extenuating circumstances necessitating the request will be considered.

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.

DEAN'S LIST

At the end of each term, a *Dean's List* is compiled, which lists the names of all full-time students (12 or more credits) who have achieved a point average of 3.50 or better for the term. No student is eligible for the list who has a grade of "'IN'" or "F."

Part-time students who have earned 10 or more hours of credit in any academic year (fall and spring semesters) with a GPA of 3.50 or above will be recognized on the *Dean's List* at the end of spring semester each year. Students eligible for this recognition would be limited to students who in any academic year have not been full-time.

CROSS-REGISTRATION

Stark State College has made arrangements with many colleges and universities to provide opportunities for cross-registration. To cross-register, students should contact the Registration Office to obtain details of the program of interest.

ACADEMIC PROBATION/DISMISSAL

Probation is a message to alert 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 2.0 will be placed on academic probation. Students on academic probation are required to meet with their academic advisor before the beginning of the next term.

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 head 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

Doing Papers, Outside Work – Work done out of class, which a student submits as the student's own work to a professor, should be the student's own and should not contain that which has been knowingly obtained from another, other than properly credited references, sources and citations.

Taking Exams, Tests, Quizzes – Work done on a test, exam or quiz, which a student submits to a professor, should be the student's own and should not contain that which has been knowingly obtained from another.

Instructor-lmposed Limitations – The work which a student submits to a professor should be prepared in accordance with the rules, limitations and regulations laid down by the professor in the course. These rules are often intended to put students on an equal footing.

Preparing for Exams – A student should not seek to gain an advantage in an exam the student is about to take by obtaining advanced access to questions or advance copies of a professor's current exam.

A student should not cooperate with, aid or encourage another student to violate the above rules, even though the student receives no direct benefit to his/her grade.

Each professor should take responsibility for promoting honesty in learning.

Faculty will inform students of behavior appropriate for maintenance of the *Honesty in Learning* policy as it pertains to their particular courses and disciplines.

Faculty who discover a violation of this *Honesty in Learning* policy with respect to their particular courses shall assume the responsibility for confronting the violator(s) immediately about the violation.

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, imposed by faculty, including failure of the course. The faculty member involved shall assume the responsibility for notifying—in writing—the student involved of the penalties.

Dishonesty – such as cheating, plagiarism, or knowingly furnishing false information to the College or its staff—will subject a student to disciplinary action which may include dismissal from the College. The faculty member in whose course the dishonesty has occurred may, at his or her discretion, report the violation to the vice president for instructional and corporate services. This report from the faculty member shall be made within one week of the faculty member's discovery of the violation and shall be in writing. If the violation is discovered at the end of the semester, the report shall be made within the first week of the following semester. The faculty member shall also send a copy of the report to the student involved.

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 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 head or appropriate dean.

- Completion of the application for graduation form and payment of the $30.00 fee no later than November 20 of the academic year the degree is expected.

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 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.

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.

COOPERATIVE EDUCATION PROGRAM

Co-operative Education is an academic program in which students combine outside, practical, on-the job work experience with classroom academics. It enables students to understand the relationship between classroom studies and their practical application in working situations. Students who co-op get experience in their chosen career.

The co-op program offers these advantages to students:

1. Students may use equipment not available to them at the College.
2. They have access to information and viewpoints not available in libraries or the classroom.
3. Co-op jobs at Stark State are always in the field of the student's academic major, so the experience gained is immediately useful upon graduation.
4. In some cases, there is an opportunity for co-op graduates to go to work for the employer with whom they do their co-op experience.
5. Employers frequently offer higher starting wages to co-op graduates, since they already have some practical working experience in addition to their degree.

The Cooperative Education program is offered in most of the two-year programs in the business and engineering technology divisions at Stark State. Some co-op jobs require the student to work part-time each day and attend school part-time each day (the parallel plan), while others require the student to alternate a semester of full-time work with a semester of full-time school (the alternating plan).

To qualify for co-op, a student must have sophomore status; have at least a 2.5 cumulative grade point average; and be approved by both the co-op office and the appropriate department head. Scholastic credit is given for the co-op experience.

Students interested in the co-op program may register by completing an application which will be kept on file in the Career Services Office. The selection of the co-op student is done through a formal interview process by the employer. For further information or questions contact the Career Services Office at 330-966-5459.

TRANSFERABILITY OF CREDITS

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

"TWO-PLUS-TWO" 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 two-year upper division (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's degree are urged to investigate "two-plus-two" programs, and to discuss their plans with our counselors.

The "two-plus-two" approach to baccalaureate degrees offers several advantages to the technical college graduate:

1. **Educational.** The "two-plus-two" 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 second two 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 "two-plus-two" 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 "two-plus-two" plan is economically feasible for most students because they can work in their chosen field while completing the last two years of a 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 two-year college students can find out early in their "two-plus-two" education if their career choice meets their expectations.

4. **Recognition.** The attainment of a meaningful associate's degree is an encouraging step at halfway point to the baccalaureate degree via the "two-plus-two" approach, and represents an additional valid credential to prospective employers.

Earn a bachelor's degree at Stark State College

Stark State College of Technology has entered into an alliance with Columbus-based Franklin University that will enable Stark State students to earn bachelor's degrees without leaving the Stark State campus. As of press time for this catalog, Stark State and Franklin will offer bachelor's degrees in:

- business administration
- technical management
- computer science
- management information systems
- health care management
- public safety management

More degree programs will be added in the future, so be sure to check with the College's Office of Admissions/Student Services for the most current information. Stark State College has offered numerous "two-plus-two" and articulated degree programs for many years, but this is the first time a student will be able to earn a bachelor's degree without transferring to another college or university.

If you have earned an associate's degree or at least 60 semester hours of college credit (with a minimum GPA of 2.5), you would enroll in 24 semester hours of "bridge courses" offered by Stark State, which would prepare you for the upper-level courses offered by Franklin University. You would then be able to enroll in Franklin University's online courses and "attend" class via computer from labs at Stark State, from your home, or from any other online connection. Franklin's degree completion program requires an additional 40 to 44 semester hours, depending on the major you choose.

To be eligible for this program, you will need to have access to a computer that has an Internet connection. If you do not have an online computer at home, you may use Stark State's computer labs, subject to their availability. You will also need a permanent e-mail address. Many e-mail providers offer free e-mail addresses. Our computer lab instructors and Office of Admissions/Student Services staff can help you get started.

Once enrolled in Franklin's program, your course assignments will be posted by e-mail, and there will be scheduled chat sessions for class discussion and contact with professors. You will have online access to help desks, tutorial services and library resources. You will continue to have access to all of Stark State's facilities and services, including academic advising and job placement/career services.

Detailed, up-to-date information is available from Stark State's Office of Admissions/Student Services. Stark State's web site *(www.stark.cc.oh.us)* or Franklin University's web site *(www.franklin.edu)* will have updated information as well.

Franklin University is accredited by the The Higher Learning Commission and a member of North Central Aassociation (30 North LaSalle Street, Chicago, IL 60602-2504; 312-263-0456) to grant both campus-based and online degrees.

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* contains 54-60 quarter hours or 36-40 semester hours of specified course credits in English composition, mathematics, fine arts, humanities, social sciences, behavioral science, natural science, physical science and interdisciplinary coursework.

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

A multi-level, broad based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state level Articulation and Transfer Appeals Review Committee.

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

New students should indicate their interest in completing the *transfer module* on application to the College. Current or returning students should discuss this option with their academic advisor or an admissions 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 (12-14 semester hours 18-24 qtr)**	**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: ENG122 (3), ENG121 (3), ENG122 (3) *(3 semester hours)*
MATHEMATICS *minimum* *6 semester hours*	Select two courses: MTH122 (3), MTH221 (3), MTH 223 (4) MTH123 (3), MTH222 (3) *(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) and SOC121 (3) or 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		
Business Communication	ENG	123
College Composition	ENG	124
Technical Report Writing	ENG	221
Composition and Literature	ENG	224
Mathematics		
College Algebra and Trigonometry II	MTH	122
College Algebra	MTH	123
Concepts of Calculus	MTH	221
Statistics	MTH	222
Analytic Geometry – Calculus I	MTH	223
Arts & Humanities		
Ethics	PHL	122
Understanding Architecture	ARCH	11013
Art Survey	ART	12001
Art History I: Ancient and Medieval Art	ART	22006
Intro. to Shakespeare	ENG	22055
Major Modern Writers:		
British and United States	ENG	23079
Great Books I	ENG	24071
History of Civilization I	HIST	11050
History of Civilization II	HIST	11051
History of the U.S., The Formative Period	HIST	12070
History of the U.S., The Modern Period	HIST	12071
The Understanding of Music	MUS	22111
Interpreting the Black Experience I	PAS	23101
Interpreting the Black Experience II	PAS	23102
Social Science		
General Psychology	PSY	121
Sociology	SOC	121
Sociology and Technology	SOC	122
Dynamics of the Family	SOC	123
Cultural Diversity	SOC	225
Natural and Physical Science		
Intro. to Anatomy and Physiology	BIO	101
Anatomy and Physiology I	BIO	121
Anatomy and Physiology II	BIO	122
Science, Energy and the Environment	BIO	126
Human Biology	BIO	127
Principles of Microbiology	BIO	221
Introduction to Chemistry	CHM	101
General Chemistry	CHM	121
Organic and Biological Chemistry	CHM	122
Principles of Physics	PHY	101
Physics I	PHY	121
Physics II	PHY	122
Physics I with Calculus	PHY	221
Physics II with Calculus	PHY	222

**Indicates courses offered at Kent State-Stark Campus*

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
- contract training/education and assessment services
- computer certification tests, and
- the Stark County Labor-Management Council

CONTINUING EDUCATION CLASSES, WORKSHOPS AND SEMINARS

The division of corporate and community services offers a full range of continuing higher education classes, workshops and seminars that can help currently employed persons, prepare them for a new career and enrich their lives. Most programs are held at the Advanced Technology Center.

Continuing education classes are designed to meet the mandatory continuing education licensure requirements of professionals in a variety of fields, such as social work, counseling, child care, health care, and law enforcement. In addition, continuing education programs for children are offered during the summer.

Each semester, the College publishes a schedule of continuing education classes. For more information about continuing education classes or to request a schedule, please call 330-966-5455 or visit our Website at *www.stark.cc.oh.us.*

CONTRACT TRAINING/EDUCATION AND ASSESSMENT SERVICES

In addition to continuing education, the corporate and community services division offers contract training/education 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. Our highly qualified consultants and faculty 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 corporate and community services division has operated an ISO/QS9000 consortium program that assists companies to become ISO/QS9000 compliant and/or certified. For more information about contract training services, please call 330-966-5465.

Continuing education and contract training programs are held on campus or at the company location.

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), the Learning Resource Network (LERN) 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 MOUS, MCSE and CISCO 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 Registration 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 Registration Office to obtain a copy of the official transcript.

STARK COUNTY LABOR-MANAGEMENT COUNCIL

The Stark County Labor-Management Council is housed in College's Advanced Technology Center. The goal of the Council is to create harmony between labor and management and to enhance economic development in Stark County. The SCLMC 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 330-966-5455, Ext. 4505.

Tentative College Calendar

2001

FALL SEMESTER 2001

Classes Begin . . . . . August 27
Last Day of Classes . . . . . December 10
Exam Week . . . . . December 11-14
Holidays . . . . . Labor Day-September 3
. . . . . Columbus Day-October 8
. . . . . Thanksgiving-November 22-24

2002

SUMMER SESSION 2002

All sessions begin . . . . . June 3
First five-week session ends . . . . . July 6
Second five-week session begins . . . . . July 8
Eight-week session ends . . . . . July 27
Second five-week session ends . . . . . August 10
Holiday . . . . . Independence Day– July 4

FALL SEMESTER 2002

Classes Begin . . . . . August 26
Last Day of Classes . . . . . December 9
Exam Week . . . . . December 10-13
Holidays . . . . . Labor Day-September 2
. . . . . Columbus Day-October 14
. . . . . Thanksgiving-November 28,29

2003

SPRING SEMESTER 2003

Classes Begin . . . . . January 13
Last Day of Classes . . . . . May 3
Exam Week . . . . . May 5-8
Holidays . . . . . Martin Luther King Jr. Day-January 20
. . . . . Presidents' Day-February 17
Semester Break . . . . . March 24-29
Commencement . . . . . May 18

SUMMER SESSION 2003

All sessions begin . . . . . June 2
First five-week session ends . . . . . July 3
Second five-week session begins . . . . . July 7
Eight-week session ends . . . . . July 26
Second five-week session ends . . . . . August 9
Holiday . . . . . Independence Day-July 4

2004

SPRING SEMESTER 2004

Classes Begin . . . . . January 12
Last Day of Classes . . . . . May 1
Exam Week . . . . . May 3-6
Holidays . . . . . Martin Luther King Jr. Day-January 19
. . . . . President's Day-February 16
Semester Break . . . . . March 22-27
Commencement . . . . . May 16

FALL SEMESTER 2004

Classes Begin . . . . . August 30
Last Day of Classes . . . . . December 13
Exam Week . . . . . December 14-17
Holidays . . . . . Labor Day-September 6
. . . . . Columbus Day-October 11
. . . . . Thanksgiving-November 25, 26

SUMMER SESSION 2004

All sessions begin . . . . . June 7
First five-week session ends . . . . . July 12
Second five-week session begins . . . . . July 12
Eight-week session ends . . . . . July 31
Second five-week session ends . . . . . August 14
Holiday . . . . . Independence Day-July 4

2005

SPRING SEMESTER 2005

Classes Begin . . . . . January 18
Last Day of Classes . . . . . May 7
Exam Week . . . . . May 9-12
Holidays . . . . . Martin Luther King Jr. Day-January 17
. . . . . Presidents' Day-February 21
Semester Break . . . . . March 21-26
Commencement . . . . . May 22

BUSINESS TECHNOLOGIES

Accounting Technology
CPA Option
Corporate Option
EDP Option
Bookkeeping Certificate

Administrative Information Technology
Administrative Information Certificate

Business Management Technology
Health Services Option
International Business Option
Small Business Option

Computer Technology
Application Developer Track
AS/400 Track
Database Administrator Track
Database Developer Track
Microcomputer Integration Track

E-Business Programming Technology – Pending
E-Commerce Application Developer Track
E-Commerce Web Server Administrator Track

Financial Services Technology

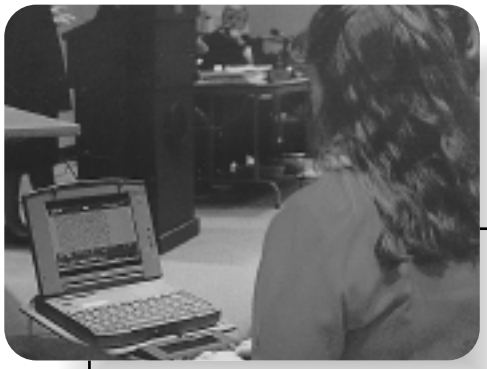
Information Reporting Technology
Judicial Reporting Track
Captioning Option – Under Development
Realtime Transcription Option – Under Development

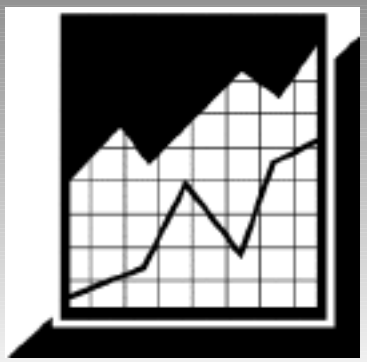
Legal Assisting Technology

Marketing Management Technology
E-Commerce Option
Retailing Option
Sales Option

Microcomputer Applications Technology
Software Support Specialist Track

Operations Management Technology





Business Technology Programs

Division of Business Technologies

The business technologies division of Stark State College is dedicated to providing a current and relative technical education for those pursuing careers in a complex business world that is undergoing unprecedented change.

Representatives of business and industry are constantly searching for men and women capable of working together in an effective manner to achieve goals. Each business program includes ***core courses*** addressing the skills required in all business environments. The business world is oriented to the preparation, use and interpretation of accurate oral, written, and number-based data. The core is designed to strengthen abilities in those areas as well as to allow flexibility in choosing one's career path.

The number of skilled workers needed is great and growing. SSCT's business technologies division is striving to meet that need with 25 degree programs and option offerings. The programs were designed with the assistance of advisory committees composed of representatives of local employers, and are delivered by faculty chosen for their real-world business experience as well as their strong academic background. They and our entire staff continually strive to ensure that our students acquire the skills, knowledge and behaviors necessary to succeed in the rapidly changing workplace.

Credit coursework is available to those seeking to enter the business field for the first time, as well as for those who are currently employed and wish to expand their knowledge base. Courses may be taken as part of a complete program leading to an associate degree or in skill-specific groups leading to career enhancement certifications.

The business technologies division has numerous articulation agreements that permit credits to transfer to other institutions. An associate of applied business degree from Stark State can truly be the gateway to additional degrees.

TECH PREP
A TECH PREP PARTICIPANT

FRANKLIN UNIVERSITY

Accounting Technology

The accounting curriculum gives students the solid foundation in accounting theory that is necessary for entry- to upper-level accounting positions and career advancement.

This curriculum meets the necessary requirements for graduates to sit for the Certified Public Accountant's (CPA) Examination as set forth in the *Ohio General Code*. Candidates must have obtained at least an associate's degree with a concentration in accounting that includes related courses in other areas of business administration and complete the Graduate Record Examination (GRE) before sitting for the CPA examination. After four years of approved work experience, the candidate may be certified.

Other job opportunities are tax accounting, governmental accounting, industrial/cost accounting, not-for-profit accounting and accounting for small business.

Accounting majors study general accounting theory and, in addition, may specialize in public accounting (CPA) and corporate accounting (controllership). As an alternative to going directly to work in an accounting position after graduation, some students major in accounting for a good, solid educational foundation and, after completing their baccalaureate degree, go on to graduate school. For many graduates, accounting has proven to be an excellent foundation for advancement to top executive positions.

The College also 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.

Bookkeeping Certificate

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ACC	121	Principles of Accounting I	4
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
			19
Semester II			
ACC	122	Principles of Accounting II	4
ACC	229	Accounting Practice and Problems	3
ACC	227	Current Accounting Topics	3
ENG	123	Business Communication	3
ACC	130	Business Law and Ethics	3
			16

35 SEMESTER CREDITS

* Successful completion of OAD102, 104, 105 and 106 equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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Accounting Technology

CPA, Corporate and EDP Options

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
BUS	123	Business Mathematics	4
BUS	121	Business Administration	4
ACC	132	Financial Accounting*	4
ACC	127	Quantitative Methods of Accounting and Finance	3
			18
Semester II			
ENG	123	Business Communication	3
CAP	120	Business Computer Applications***	4
ACC	221	Intermediate Accounting I	4
ACC	133	Managerial Accounting	4
BUS	122	Basic Economics	3
			18
Semester III			
SPH	121	Effective Speaking	3
ACC	124	Taxation	4
ACC	222	Intermediate Accounting II	4
ACC	223	Cost Accounting	4
		Accounting Elective****	3
			18
Semester IV			
PSY	121	General Psychology**	3
ACC	225	Auditing	4
FIN	122	Principles of Finance	4
		Accounting Elective****	3
ACC	129	Business Law and Ethics	3
			17

71 SEMESTER CREDITS

* Student may select ACC 121 and ACC122 in place of this course.
** Student may select PSY124, SOC121, or SOC225 in place of this course.
*** Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120
† Based on SSCT placement score.

****Options Electives

CPA Option: Students should select two from ACC226, ACC228, ACC232, or Co-op. ***(NOTE: Students planning to sit for the CPA Examination should consider taking ACC226, ACC228, and/or ACC232 as their electives.)***

Corporate Option: Students should select two from ACC226, ACC 227, ACC228, ACC229 or Co-op.

EDP Option: Students should select two from ACC 227, ACC 229 or Co-op.

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Administrative Information Technology

formerly Office Administration Technology

Students who choose career programs offered in the administrative information technologies department are in enviable positions. There are tremendous opportunities and career choices for people with skills in information management software and office technology. Career options for administrative professionals at all levels are rapidly expanding as a result of the automation of administrative functions.

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 creates paths to other careers in computers, desktop publishing, administration, human resources and management.

The International Association of Administrative Professionals defines an administrative professional as "an executive assistant who possesses a mastery of office skills, who demonstrates the ability to assume responsibility without direct supervision, who exercises initiative and judgment and who makes decisions within the scope of assigned authority."

The curriculum in the administrative information technology degree program is highly computerized. Most courses utilize computers and current software. Courses include instruction on fax machines, copiers, scanners and voice input software. The Internet and web page design are also part of the curriculum.

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

Graduates in the administrative information technology department often continue toward other advanced degrees at other colleges and online universities.

The Microsoft Corporation has expanded its certification process to include certification testing for most Microsoft Office products. Tests are available at *Core* and *Expert* levels. The Microsoft Office User Specialist (MOUS) program is a validation program that gives office professionals credentials that can prove they know how to use Microsoft Office applications efficiently and productively.

The Advanced Technology Center of Stark State College is an authorized testing site for the Microsoft MOUS exams.

For more information regarding certification contact the department head of administrative information technologies.

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 office administration technology, subject to the review and approval of the appropriate department heads.

Designated courses in the administrative information technologies department contain the content of Microsoft certification tests. Courses leading to certification are italicized in bold and contain the names of Microsoft Office software applications.

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Administrative Information Technology

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
OAD	130	Communication and Transcription Skills	3
OAD	121	Keyboarding/Formatting	3
BUS	123	Business Math	4
CAP	120	Business Computer Applications**	4
BUS	121	Business Administration	4
			21
Semester II			
OAD	***127***	***Word Processing – Microsoft Word***	***3***
ACC	121	Principles of Accounting I	4
ENG	123	Business Communication	3
OAD	129	Keyboarding Skillbuilding (8 weeks)	1
		Social Sciences Elective*	3
OAD	132	Introduction to Records Management	3
			17
Semester III			
OAD	***226***	***Spreadsheets - Microsoft Excel***	***3***
ACC	130	Business Law and Ethics	3
OAD	131	Graphic Design Concept	3
OAD	***104***	***Computer Applications – PowerPoint***	***1***
SPH	121	Effective Speaking	3
OAD	128	Desktop Publishing – Microsoft Publisher	3
			16
Semester IV			
BUS	122	Basic Economics	3
OAD	227	Administrative Procedures and Systems	3
OAD	232	Office Administration Practicum***	3
OAD	***236***	***Database Applications – Microsoft Access***	***3***
OAD	225	Administrative Machine Transcription	3
OAD	238	Web Publishing – Microsoft Front Page	3
			18

72 SEMESTER CREDITS

* May select from SOC121 or PSY121.
** Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.
*** May substitute IDS206 with permission of the department head.
† Based on SSCT placement score.

Bold italicized courses indicate courses that contain content for Microsoft Office User Specialist (MOUS) 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.

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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 office administration 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 head of administrative information technologies.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
OAD	121	Keyboarding/Formatting	3
OAD	***127***	***Word Processing – Microsoft Word***	***3***
ENG	124	College Composition†	3
		Social Sciences Elective*	3
BUS	123	Business Math	4
CAP	120	Business Computer Applications**	4
			20
Semester II			
OAD	***236***	***Database Applications – Microsoft Access***	***3***
ENG	123	Business Communication	3
OAD	***226***	***Spreadsheet - Microsoft Excel***	***3***
OAD	131	Graphic Design Concepts	3
OAD	132	Introduction to Records Management	3
			15

35 SEMESTER CREDITS

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

* Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.
** May select from SOC121 and PSY121.
† Based on SSCT placement score.

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

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Business Management Technology

Managing today is increasingly technology and Internet based. Companies and their managers are relying on technology to manage their businesses more efficiently and responsively. People are still the main part of managing. With today's emphasis on competitiveness, team-based organizations, and responsiveness, the people side of managing is crucial. Managers must manage change and must change organizational culture. Teamwork is essential. As the workforce becomes increasingly diverse and global, it is important that managers learn the techniques to manage diversity effectively.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MGT	121	Principles of Management	3
MKT	121	Principles of Marketing	3
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MGT	221	First-Line Supervision	3
BUS	221	Microeconomics	3
MGT	227	Production and Operations Management	4
ACC	130	Business Law and Ethics	3
ACC	133	Managerial Accounting	4
		Technical Elective	2
			19
Semester IV			
MGT	224	Human Resources Management	3
BUS	222	Macroeconomics	3
MGT	223	Business Decision-Making	3
SOC	121	Sociology	3
MGT	225	Contemporary Management Issues	2
		Technical Elective	3
			17

70 SEMESTER CREDITS

TECHNICAL ELECTIVES

MGT 229	Quality Management	MKT 226	Purchasing
MKT 222	Advertising	MGT 231	Customer Service
MKT 221	Sales	MGT 232	International Trade

* Successful completion of OAD102, 104, 105 and 106 equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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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. Insurance claim processors such as Aultcare, Hometown and Professional Claims Management can fully utilize the skills obtained from a graduate of this program.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
BIO	125	Medical Terminology	3
			18
Semester II			
MGT	121	Principles of Management	3
MKT	121	Principles of Marketing	3
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MGT	221	First-Line Supervision	3
BUS	221	Microeconomics	3
BIO	101	Introduction to Anatomy and Physiology	3
SPH	121	Effective Speaking	3
ACC	133	Managerial Accounting	4
HIT	230	Healthcare in the United States	2
			18
Semester IV			
MGT	224	Human Resource Management	3
BUS	222	Macroeconomics	3
MGT	223	Business Decision-Making	3
SOC	121	Sociology	3
ACC	130	Business Law and Ethics	3
MAT	231	Reimbursement for Healthcare Services	3
			18

70 SEMESTER CREDITS

* Successful completion of OAD102, 104, 105 and 106 equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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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 no doubt continue in the new millennium. More and more U.S. companies are becoming aware that the only 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.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MGT	121	Principles of Management	3
MKT	121	Principles of Marketing	3
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MGT	221	First-Line Supervision	3
BUS	221	Microeconomics	3
MGT	232	International Trade	3
ACC	130	Business Law and Ethics	3
ACC	133	Managerial Accounting	4
		Technical Elective	3
			19
Semester IV			
BUS	223	International Banking	3
BUS	222	Macroeconomics	3
ACC	134	International Law	3
SOC	225	Cultural Diversity	3
MGT	225	Contemporary Management Issues	2
		Technical Elective	3
			17

70 SEMESTER CREDITS

TECHNICAL ELECTIVES

MGT229	Quality Management	MGT227	Production and Operations Management
MGT231	Customer Service	MKT226	Purchasing

* Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.

† Based on SSCT placement score

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Business Management Technology

Small Business Option

Small businesses are becoming more numerous and important in today's world. Small businesses account for nearly half of all of this country's business activities and create most of the new jobs. Nearly 20 million business enterprises are classified as small, and they generate over one-half of our gross domestic product.

Companies such as Wal-Mart, Sears, Dell Computer, Intel and Microsoft were all started as small businesses by then unknown entrepreneurs such as Sam Walton, Richard Sears, Ray Kroc, Michael Dell and Bill Gates. By capitalizing on their imagination, initiative, courage, dedication, hard work, and often luck, each one turned an idea into a small struggling business that became one large one.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MGT	121	Principles of Management	3
MKT	121	Principles of Marketing	3
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MGT	221	First-Line Supervision	3
BUS	221	Microeconomics	3
MGT	231	Customer Service	2
ACC	130	Business Law and Ethics	3
ACC	133	Managerial Accounting	4
		Technical Elective	3
			18
Semester IV			
MGT	224	Human Resource Management	3
BUS	222	Macroeconomics	3
MGT	223	Business Decision-Making	3
SOC	121	Sociology	3
MGT	222	Small Business Management	3
		Technical Elective	3
			18

70 SEMESTER CREDITS

TECHNICAL ELECTIVES

MGT 227	Production and Operations Management
MGT 229	Quality Management
MGT 232	International Trade
MKT 221	Sales
MKT 222	Advertising
MKT 226	Purchasing

* Successful completion of OAD102, 104, 105 and 106 equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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Computer Technology

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.

This degree program focuses on the use of programming languages, databases and networking to develop business computer applications. Students learn a number of the most-used languages, as well as related system concepts. The student has the flexibility of learning advanced skills in Visual Basic, Java, C++, Cobol, RPG, Oracle, SQL Server, AS/400 or Network Administrator, as well as economics, accounting and other areas.

The computer programming technology program is designed primarily 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:

- Programmer
- Analyst
- Computer Operator
- System Administrator
- Database Administrator
- Training Specialist
- Educational Specialist
- Network Administrator
- Application Developer
- Technical Support
- Consultant
- Database Developer

The program has many strengths which help produce qualified, technically trained computer professionals.

The department'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 using computer hardware ranging from PCs to mainframe.

Computer technology instructors 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 program has been successful in providing students with the practical background and skills needed for employment in the computer field. The computer technology department is helping to produce computer professionals with the skills employers want and need.

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Computer Technology

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
CAP	121	Introduction to Computer Programming	4
SPH	121	Effective Speaking	3
BUS	121	Business Administration	4
			18
Semester II			
		Social Science Elective*	3
BUS	123	Business Math	4
		Technical Track Elective	3-4
		Technical Track Elective	3-4
		Technical Track Elective	3
		NT Track Elective Only***	2
			16-20
Semester III			
		Economics Elective **	3
		Technical Track Elective	3-4
		Technical Track Elective	3-4
		Technical Track Elective	3
CAP	227	System Design and Development	4
			16-18
Semester IV			
ENG	123	Business Communication	3
ACC	130	Business Law and Ethics	3
		Technical Track Elective	3-4
ACC	132	Financial Accounting	4
CAP	231	Data Processing Field Project	4
			17-18

67-74 SEMESTER CREDITS

* Select from PSY121 or SOC121 course offerings.
** Select from BUS122, BUS221 OR BUS222.
*** Applies to Microcomputer Integration Track only.
† Based on SSCT placement score.

The following five career tracks are available:

- Application Developer
- AS/400 Specialist
- Database Administrator
- Database Developer
- Microcomputer Integration

See following pages for technical electives for specific tracks.

A TECH PREP PARTICIPANT

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Computer Technology

Tracks and Technical Electives

Application Developer Track

This track will prepare students with the necessary skills to design and customize computer applications and databases in the business environment. Students will design, code and test computer applications using a number of the most widely used languages utilizing different computing platforms.

Students must complete *two* levels (total of four courses from the two levels):

Level 1 – Cobol I (CAP127), Cobol II (CAP128)
Level 2 – RPG I (CAP 129), RPG II (CAP130)
Level 3 – Visual Basic Programming (CAP126), Advanced Visual Basic Programming (CAP246)
Level 4 – Java Programming for Business (CAP241), Advanced Java Programming for Business (CAP247)
Level 5 – Microsoft Access Programming (CAP223), Advanced Microsoft Access Programming (CAP224)
Level 6 – Database Development Tools (CAP141), Advanced Database Development Tools (CAP248)

Students must complete *three* of the following:

- Introduction to Database Management Systems (CAP139)
- Data Modeling and Design (CAP133)
- Relational Database (CAP221)
- Advanced Microcomputer Applications (CAP125)
- Advanced Topics in DP (CAP228)
- AS/400 Concepts and Facilities (CAP138)
- Web Tools, Design and Development (CAP243)
- CL Programming (CAP244)
- Advanced Programming with RPG IV (CAP245)
- Networking Technologies (CAP253)

AS/400 Specialist Track

The AS/400 is a mid-range computer platform considered by many to be one of the most stable, secure and cost-effective E-business solutions for today's global economy. It also hosts a large and diverse collection of ERP packages that are the back-office strength of individual companies. Students acquire an extensive foundation of programming and design skills that are needed to be successful in this rewarding career.

Students must complete *all* of the following:

- AS/400 Concepts and Facilities (CAP138)
- CL Programming (CAP244)
- Relational Database (CAP221)
- Developing AS/400 Applications for the Internet (CAP254)
- RPG I (CAP129)
- RPG II (CAP130)
- Advanced Programming with RPG IV (CAP245)

Database Administrator Track

This is a series that explores the concepts and application of a relational database in the business environment. Students will use SQL, PL/SQL and various tools to manage and administrate a relational database. Upon completion, students should be able to apply the use of relational techniques to query, create, and delete database objects as well as manage the internals of a database in their choice of Microsoft SQL or Oracle environment.

Students must complete *one* of the following levels (total of two courses from one level):

Level 1 – Visual Basic Programming (CAP126), Advanced Visual Basic Programming (CAP246)
Level 2 – Java Programming for Business (CAP241), Advanced Java Programming for Business (CAP247)
Level 3 – Microsoft Access Programming (CAP223), Advanced Microsoft Access Programming (CAP224)
Level 4 – Netware Administration (CAP136), Advanced Netware Administration (CAP251)
Level 5 – Database Development Tools (CAP141), Advanced Database Development Tools (CAP248)
Level 6 – C++ Programming for Business (CAP242), Advanced C++ Programming for Business (CAP235)

Students must complete *two* of the following:

- Relational Database (CAP221)
- Data Modeling and Design (CAP133)
- Database Network Architecture (CAP249)
- Networking Technologies (CAP253)

Students select Oracle or MS SQL Server track:

ORACLE (all three courses)
- Introduction to Database Management Systems (CAP139)
- Database Administration (CAP142)
- Advanced Database Administration (CAP250)

MICROSOFT SQL SERVER (all three courses)
- Microsoft SQL Administration (CAP143)
- Advanced Microsoft SQL Administration (CAP255)
- Microsoft SQL Data Warehousing (CAP256)

TECH PREP
A TECH PREP PARTICIPANT

FRANKLIN UNIVERSITY

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Computer Technology

Tracks and Technical Electives

Database Developer Track

The student will learn to develop forms and reports that access a relational database. Also, modeling and database design techniques will be introduced, using various designer tools. Upon completion, students will have developed skills in resolving development issues in an Oracle database environment.

Students must complete *one* of the following levels (two courses from one level):

Level 1 – Visual Basic Programming (CAP126),
Advanced Visual Basic Programming (CAP246)
Level 2 – Java Programming for Business (CAP241),
Advanced Java Programming for Business (CAP247)
Level 3 – Microsoft Access Programming (CAP223),
Advanced Microsoft Access Programming (CAP224)
Level 4 – Netware Administration (CAP136),
Advanced Netware Administration (CAP251)
Level 5 – C++ Programming for Business (CAP242),
Advanced C++ Programming for Business (CAP235)

Students must complete *two* of the following:

- Relationing Database (CAP221)
- Data Modeling and Design (CAP133)
- Database Network Architecture (CAP249)
- Networking Technologies (CAP253)

Students must complete *all* of the following:

ORACLE (all three courses)
- Introduction to Database Management Systems (CAP139)
- Database Development Tools (CAP141)
- Advanced Database Development Tools (CAP248)

Microcomputer Integration Track

This track will prepare the student to take an active and effective role as a network administrator in a Novell or Windows NT operating environment. This option will also prepare the student to sit for independent certification.

Students must complete *one* of the following levels (two courses from one level):

Level 1 – Visual Basic Programming (CAP126),
Advanced Visual Basic Programming (CAP246)
Level 2 – Java Programming for Business (CAP241),
Advanced Java Programming for Business (CAP247)
Level 3 – Microsoft Access Programming (CAP223),
Advanced Microsoft Access Programming (CAP224)
Level 4 – C++ Programming for Business (CAP242),
Advanced C++ Programming for Business (CAP235)

Students must complete *two* of the following:

- Advanced Microcomputer Applications (CAP125) or (CAP257)
- Advanced Topics in DP (CAP228)
- AS/400 Concepts and Facilities (CAP138)
- Web Tools, Design and Development (CAP243)
- Introduction to Database Management Systems (CAP139)
- PC Upgrading and Maintenance (EET131)

Students select Novell or NT track:

NOVELL (all three courses)
- Networking Technologies (CAP253)
- Netware Administration (CAP136)
- Advanced Netware Administration (CAP251)

NT (all four courses)
- Introduction to Networking (ECA125)
- MS Windows 2000, Server and Network Infrastructure (EET252)
- Implementing and Administrating Windows 2000 Directory Services (EET253)
- Designing a Secure MS WIN2000 Network (EET256)

TECH PREP
A TECH PREP PARTICIPANT

FRANKLIN UNIVERSITY

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E-Business Programming Technology

E-business programming technology prepares students to work for companies and businesses that are engaged in commercial activities utilizing the World Wide Web. As e-business continues its rapid growth, the need increases for individuals with e-commerce skills, as applications developers and as Web server administrators. Stark State College offers practical education to prepare graduates to fill this need.

This program focuses on the design and development of Websites using state-of-the-art programming and scripting languages. The curriculum includes experience with Visual Basic, Java, Java Script, and HTML, as well as economics, marketing, accounting and other business-related areas. Another track focuses on the skills needed to install and administrate a Web server in either Linux or a Windows 2000 environment. In addition, students get hands-on experience in the classroom and in open labs, using computer hardware ranging from PCs to midrange computers.

The department works closely with an advisory committee of professionals from local companies to insure that the curriculum is continuously updated to reflect the new technologies in this rapidly changing field. E-business programming technology instructors have practical experience in the field. Their education and industry experience allows them to offer real-life perspectives on this complex technology.

Stark State's e-business programming technology program has been successful in providing students with the practical background and skills needed for employment in the e-commerce field and produce Internet professionals with the skill employers want and need.

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E-Business Programming Technology

E-Commerce Application Developer Track
Web Server Administrator Track

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
CAP	121	Introduction to Computer Programming	4
BUS	121	Business Administration	4
SPH	121	Effective Speaking	3
			18
Semester II			
		Social Science Elective*	3
BUS	123	Business Math	4
		Technical Track Elective	3
		Technical Track Elective	3
		Technical Track Elective	3
		Technical Track Elective	3
			19
Semester III			
		Economics Elective **	3
		Technical Track Elective	3
		Technical Track Elective	3
CAP	227	System Design and Development	4
		Technical Track Elective	3
		Technical Track Elective	3-4
			19-20
Semester IV			
ENG	123	Business Communication	3
ACC	130	Business Law and Ethics	3
CAP	231	DP Field Project	4
ACC	132	Financial Accounting	4
			14
(Application Developer Track Only)			
		Technical Track Elective	3-4
			17-18

70-74 SEMESTER CREDITS

* Select from PSY121 or SOC121 course offerings.
** Select from BUS221, BUS222, or BUS122.
† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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E-Business Programming Technology

Tracks and Technical Electives

E-Commerce Application Developer Track

Develops the student's ability to use programming and scripting languages to design and implement dynamic Websites that allow users to enter and retrieve data from an online database. Learn to use tools such as Visual Basic, Java, JavaScript, HTML, and active server pages to create well-designed Internet applications.

Students must complete the following nine courses:

- Visual Basic Programming (CAP126)
- Java Programming for Business (CAP241)
- Advanced Java Programming for Business (CAP247)
- Web Tools, Design and Development (CAP243)
- Client Web Scripting (CAP258)
- Server Web Programming (CAP261)
- Principles of Marketing (MKT121)
- Internet Marketing - 2 credit hours (MKT232)
- Developing Data-Driven Websites (CAP260)

E-Commerce Web Server Administrator Track

Develops the student's ability to install and maintain a Web server using either Internet Information Server/Windows 2000 or Apache Web Server/Linux. Learn about such important issues as networking security and installing and maintaining a large networked database.

Students must complete the following eight courses:

- Web Tools, Design and Development (CAP242)
- Client Web Scripting (CAP258)
- Networking Technologies (CAP253)
- Data Encryption and Firewall Technology (EET258)
- Web Server Administrator (EET259)
- Linux Operating System (CAP259)
- MS Windows 2000, Server and Network Infrastructure (EET252)
- Introduction to Database Management Systems (CAP139)

A TECH PREP PARTICIPANT

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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.

New students, and persons already working in the financial services field, will find that this program provides an opportunity to develop new skills and to enhance the scope of their current skills.

Career opportunities abound, both now and in the near future. A degree in financial services would be especially useful to those pursuing careers in accounting, banking and trust administration, insurance, law, personal financial planning and securities brokerage.

Providing personal financial services requires a competence and style similar to that of other professional consulting businesses. The adviser 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.

No one is exempt from the need to develop personal financial plans. Personal financial planning applies to many middle-income families and not just to the wealthy. This curriculum helps individuals face the financial challenges, responsibilities and opportunities of life.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
BUS	123	Business Mathematics	4
BUS	121	Business Administration	4
ACC	132	Financial Accounting*	4
ACC	127	Quantitative Methods of Accounting and Finance	3
			18
Semester II			
ENG	123	Business Communication	3
CAP	120	Business Computer Applications***	4
BUS	122	Business Economics	3
ACC	130	Business Law and Ethics	3
FIN	123	Fundamentals of Financial Services	3
			16
Semester III			
SPH	121	Effective Speaking	3
ACC	124	Taxation	4
FIN	221	Investments and Securities	4
MKT	121	Principles of Marketing	3
FIN	224	Insurance Planning	3
			17
Semester IV			
PSY	121	General Psychology**	3
FIN	223	Estate and Income Tax Planning	3
FIN	222	Retirement Planning and Employee Benefits	3
FIN	225	Financial Services Cases and Practices	3
FIN	122	Principles of Finance	4
			16

68 TOTAL CREDIT HOURS

* Student may select ACC121 Principles of Accounting I and ACC122 Principles of Accounting II in place of this course.

** Student may select PSY124, SOC121, or SOC225 in place of this course.

*** Successful completion of OAD102, 104, 105, and 106 is equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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Information Reporting Technology

with Judicial Reporting, Captioning* and Realtime Transcription* Tracks; formerly known as Court and Conference Reporting Technology

The role of court reporters has evolved tremendously over the past ten years. Court reporters are using their knowledge and skill to serve as information managers in complicated trials. Freelance reporters now have the ability to capture their disposition in digital format. A broadcast captioner can assist millions of deaf and hard-of-hearing persons by captioning television and news programs. Education reporters are assisting students who are hearing-impaired through the use of realtime technology. 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.

There is an increasing demand in the field of court reporting and an abundance of career opportunities available. The National Court Reporters Association states that today's technologically advanced reporting includes realtime reporting, computer-aided transcription, litigation support, total access courtrooms, closed captioning, video captioning, braille display, and more – which ultimately makes reporters even more valuable and secure than ever before. In court reporting, earning potential often is limited only by the amount of time a reporter is willing to devote to the profession.

Stark State College offers state-of-the-art technology, computer-aided instruction (CAI), and computer-aided transcription (CAT) training, which provides students with hands-on realtime writing experience, and an extensive, conflict-free Phoenix theory personal dictionary equipping the students for realtime reporting and preparing them for today's sophisticated reporting careers. The information reporting technologies associate degree program will offer three tracks: judicial reporting, captioning and realtime transcription.

Captioning 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 leading captioning company nationwide will be partnering with the administrative information technologies department to provide the software, educational, and technical support necessary to implement captioning into the information reporting technologies program. Stark State is projected to be a training site for transitional reporters currently in the field who are looking for a career change to captioning.

Graduation stenotype speed requirements for the judicial reporter and the captioning tracks in the information reporting technology program are as follows:

Judicial reporting: passing three five-minute machine shorthand tests of literary at 180 wpm, jury charge at 200 wpm, and testimony at 225 wpm with 95% accuracy.

Captioning (pending): Passing three five-minute realtime machine shorthand tests of literary/technical material at 200 wpm with 98% accuracy.

Graduation keyboarding speed requirements for each option in the information reporting technology program are as follows: Passing at least two five-minute keyboarding tests from unfamiliar material at a minimum of 60 wpm (maximum of five errors).

* Under development

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Information Reporting Technology

Judicial Reporting, Captioning (under development) and Realtime Transcription (under development) Tracks

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
CAP	120	Business Computer Applications**	4
OAD	121	Keyboarding/Formatting	3
CCR	121	Court Reporting Theory I	4
OAD	130	Communication and Transcription Skills	3
			17
Semester II			
BUS	123	Business Math	4
BIO	101	Introduction to Anatomy and Physiology	3
		Technical Track Elective	3
CCR	122	Court Reporting Theory II	4
		Technical Track Elective	3
			17
Summer I			
CCR	129	Speed Building I	4
BUS	122	Basic Economics*	3
			7
Semester III			
ENG	123	Business Communication	3
ACC	130	Business Law and Ethics	3
		Technical Track Elective	1-3
CCR	130	Speed Building II	4
BUS	121	Business Administration	4
			17
Semester IV			
		Basic Economics*	3
		Technical Track Elective	3
		Technical Track Elective	3
CCR	123	Speed Building III (required lab)	2
CCR	232	Information Reporting Internship	2
			13

69-71 TOTAL CREDIT HOURS

* May select from SOC121 or PSY121
** Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.
† Based on SSCT placement score.

A stenograph machine must be purchased prior to beginning this program. Used machines are listed outside of faculty office B215Y. It is not necessary to buy new machine.

Judicial Reporting Track

Courses in this track will include instruction in judicial reporting for careers in the court system and the freelance environment. Students will learn the process of recording verbatim testimony with a computerized stenograph machine utilizing realtime software applications and computer-aided transcription, preparing them for today's sophisticated reporting careers.

- Realtime Transcription (CRR228)
- Realtime Software Applications (CRR229)
- Judicial Procedures (CRR231)
- Legal Terminology (CRR131)
- Medical Terminology (BIO125)

Captioning Track (under development)

Courses in this track will include instruction in realtime/caption production technologies. Topics will include specialized vocabulary utilizing realtime/caption equipment. Students will learn realtime/caption production technologies, specialized vocabulary, and procedures for captioning live and remote transcription of news broadcasts, live TV programming and all media events.

Realtime Transcription Track (under development)

Courses in this track will include instruction in operating realtime court reporting software for the production of legal transcripts. Students will learn the process of recording verbatim testimony with the use of computerized stenograph machines. Students will learn and practice specialized transcription skills for the production of legal, medical and judicial documents.

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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 objectives of the legal assisting technology program are:

- to provide the basic legal knowledge and skills needed in legal and business environments.
- to develop the analytical and technical skills necessary to design, develop or plan modifications or new procedures, techniques, services, processes or applications in the field of law.
- to provide students with the practical hands-on opportunity to prepare or interpret legal documents and write detailed procedures for practicing in certain fields of law and general business environments.
- to provide students with an understanding of how to select, compile and use technical information.
- to teach students to analyze and follow procedural problems that involve independent decisions.
- to provide the communication skills for effective interaction with other members of the legal business community.
- to provide students with the opportunity to gain hands-on experience with microcomputer applications of word processing, databases and spreadsheets.
- to provide students with knowledge and expertise in various law office information systems and procedures for legal research using the Internet.
- to help students become more effective and efficient in law office management and procedures.

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 appropriate department heads.

Designated courses in the administrative information technologies department contain the content of Microsoft certification tests. Courses leading to certification are italicized in bold and contain the names of Microsoft Office software applications.

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Legal Assisting Technology

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
OAD	132	Records Management	3
OAD	121	Keyboarding/Formatting	3
OAD	130	Communication and Transcription Skills	3
CAP	120	Business Computer Applications**	4
BUS	121	Business Administration	4
			20
Semester II			
OAD	224	Legal Office Procedures	3
ENG	123	Business Communication	3
OAD	129	Keyboarding/Skillbuilding (8 weeks)	1
PSC	121	Political Science	3
OAD	***127***	***Word Processing Microsoft Word***	***3***
BUS	123	Business Mathematics	4
			17
Semester III			
CCR	128	Legal Transcription	3
SPH	121	Effective Speaking	3
OAD	***236***	***Database Applications – Microsoft Access***	***3***
ACC	130	Business Law and Ethics	3
		Social Sciences Elective*	3
ACC	121	Principles of Accounting I	4
			19
Semester IV			
OAD	237	Legal Office Applications	3
OAD	235	Legal Research and Writing	3
OAD	***226***	***Spreadsheets – Microsoft Excel***	***3***
OAD	232	Office Administration Practicum	3
BUS	122	Basic Economics	3
			15

71 TOTAL CREDIT HOURS

* May use SOC121 or PSY121.
** Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.
† Based on SSCT placement score.

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

Students may use the following courses to receive a competency certificate in realtime transcription. A steno machine must be purchased prior to beginning the following courses. Used machines are listed outside faculty office B215Y. It is not necessary for students to purchase a new machine.

May use CCR121 CR Theory I in place of Communication and Transcription Skills
May use CCR122 CR Theory II in place of Database Applications Microsoft Access
May use CCR129 Speed Building I in place of Records Management
May use CCR130 Speed Building II in place of Spreadseets Microsoft Excel
Must take Realtime Transcription

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Marketing Management Technology

The many jobs involved in getting goods 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.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MKT	121	Principles of Marketing	3
BUS	221	Microeconomics	3
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MGT	121	Principles of Management	3
BUS	222	Microeconomics	3
MKT	221	Sales	3
MKT	222	Advertising	3
ACC	133	Managerial Accounting	4
MKT	227	Consumer Behavior	3
			19
Semester IV			
MKT	229	Market Planning	3
MKT	226	Purchasing	3
MKT	228	Business to Business Marketing	3
MKT	231	Contemporary Marketing Issues	2
SOC	121	Sociology	3
ACC	130	Business Law and Ethics	3
			17

70 SEMESTER CREDITS

* Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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Marketing Management Technology

E-Commerce 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 and is expected to grow from $43 billion in 1998 to $1.3 trillion in 2003, accounting for more than 90% of the dollar value of e-commerce by 2003.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	121	Introduction to Computer Programming	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MKT	121	Principles of Marketing	3
CAP	126	Visual Basic Programming	4
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			17
Semester III			
MGT	121	Principles of Management	3
BUS	221	Microeconomics	3
MKT	232	Internet Marketing	2
MKT	222	Advertising	3
ACC	133	Managerial Accounting	4
CAP	243	Web Tools, Design and Development	3
			18
Semester IV			
MKT	229	Market Planning	3
BUS	222	Macroeconomics	3
MKT	228	Business to Business Marketing	3
CAP	258	Client Web Scripting	3
SOC	121	Sociology	3
ACC	130	Business Law and Ethics	3
			18

71 SEMESTER CREDITS

† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Marketing Management Technology

Retailing Option

The United States boasts approximately 2.5 million retail stores selling everything from apples to zoo souvenirs. Of U.S. retailers, 85% are independently owned. Retail organizations employ more than 11 million people and are one of the major employers of marketing graduates.

Non-store retailing, or direct marketing, has increased dramatically in recent years. For every dollar consumers spend in stores like Safeway and Nordstrom, they spend 37.5 cents at home ordering goods and services by mail, phone and online from sources such as Land's End and L.L. Bean. Out-of-store shopping is becoming more popular. Categories include telemarketing, vending machines, kiosks and carts, direct selling, network marketing, direct marketing and Internet marketing.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MKT	121	Principles of Marketing	3
BUS	221	Microeconomics	3
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MKT	230	Retailing	3
BUS	222	Macroeconomics	3
MGT	121	Principles of Management	3
MKT	222	Advertising	3
ACC	133	Managerial Accounting	4
MKT	227	Consumer Behavior	3
			19
Semester IV			
MKT	221	Sales	3
MKT	224	Textiles	3
MKT	223	Buying and Merchandising	3
MKT	231	Contemporary Marketing Issues	2
SOC	121	Sociology	3
ACC	130	Business Law and Ethics	3
			17

70 SEMESTER CREDITS

* Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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Marketing Management Technology

Sales Option

Effective selling isn't simply a matter of persuading others to buy. In fact, it's more accurately described today as helping others to satisfy their wants and needs.

U.S. Census data show that nearly 15% of the total labor force is employed in personal selling. When we include selling for non-profit organizations, we find that more than nine million people are employed in sales.

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.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
BUS	123	Business Math	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MKT	121	Principles of Marketing	3
BUS	221	Microeconomics	3
MGT	233	Business Research Methods	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MGT	122	Principles of Management	3
BUS	222	Macroeconomics	3
MKT	221	Sales	3
MKT	222	Advertising	3
ACC	133	Managerial Accounting	4
MKT	227	Consumer Behavior	3
			19
Semester IV			
MGT	221	First-Line Supervision	3
MKT	226	Purchasing	3
MGT	226	Sales Management	3
MKT	231	Contemporary Marketing Issues	2
SOC	121	Sociology	3
ACC	130	Business Law and Ethics	3
			17

70 SEMESTER CREDITS

* Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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Microcomputer Applications Technology

Microcomputer applications technology is designed to prepare students to work for companies and businesses that use microcomputers (desktop, personal computers, multi-user microcomputers) and related software for accounting, inventory control, purchasing, record-keeping, information processing and general office operations.

With today's fast-paced technology, a growing number of companies are using personal computers to help them manage their operations. As a result, there is an increasing need for professionals who can support and use computer hardware and software. Many of these companies look to Stark State when they want to hire new employees, or when they need to provide retraining and upgrading of skills for their current employees.

Graduates of this program will be capable of supporting computer applications on multiple platforms.

Students in this technology are introduced to various aspects of computer hardware, software and networking in order to give them a working knowledge and enable them to become immediately productive in their jobs.

The College emphasizes hands-on training, so students spend a lot of time in labs. They also get a well-rounded curriculum that exposes them to accounting and general business courses.

This program focuses on the use and integration of microcomputer business applications.

Software Support Specialist Track – focuses on the use and support of business computer applications and hardware in a networked environment. This option will prepare students for jobs in the area of help desk support and training specialist.

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Microcomputer Applications Technology

Software Support Specialist Track

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
CAP	121	Introduction to Computer Programming	4
		Technical Track Elective	3-4
BUS	121	Business Administration	4
			18-19
Semester II			
		Social Science Elective*	3
BUS	123	Business Math	4
		Technical Track Elective	3-4
		Technical Track Elective	3-4
		Technical Track Elective	3-4
			16-19
Semester III			
		Economics Elective**	3
ACC	132	Financial Accounting	4
SPH	121	Effective Speaking	3
		Technical Track Elective	3-4
		Technical Track Elective	3-4
			16-18
Semester IV			
ENG	123	Business Communication	3
ACC	130	Business Law and Ethics	3
		Technical Track Elective	3-4
		Technical Track Elective	3-4
		Technical Track Elective	3-4
			15-18

65-74 SEMESTER CREDITS

* Select from PSY121 or SOC121 course offerings.
** Select from BUS221, BUS221 or BUS122.
† Based on SSCT placement score.

Students select nine of the following courses:

CAP	126	Visual Basic Programming
CAP	223	Microsoft Access Programming
CAP	139	Introduction to Database Management Systems
CAP	138	AS/400 Concepts and Facilities
CAP	243	Web Tools, Design and Development
CAP	253	Networking Technologies
CAP	136	Netware Administration
ACC	229	Accounting Practices and Problems
CAP	133	Data Modeling and Design
CAP	259	Linux Operating System
EET	131	PC Upgrading and Maintenance

Select the following two classes or Microcomputer Applications for Application Developers:

CAP	120	Business Computer Applications
CAP	125	Advanced Microcomputer Applications
OR		
CAP	257	Microcomputer Applications for Application Developers

A TECH PREP PARTICIPANT

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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.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BUS	121	Business Administration	4
CAP	120	Business Computer Applications*	4
MTH	121	Intermediate Algebra and Trigonometry I	4
ENG	124	College Composition†	3
SPH	121	Effective Speaking	3
			18
Semester II			
MGT	121	Principles of Management	3
MKT	121	Principles of Marketing	3
MTH	222	Statistics	3
ENG	123	Business Communication	3
ACC	132	Financial Accounting	4
			16
Semester III			
MGT	229	Quality Management	3
MGT	227	Product and Operations Management	4
MGT	221	First-Line Supervision	3
MGT	231	Customer Service	2
ACC	133	Managerial Accounting	4
BUS	222	Macroeconomics	3
			19
Semester IV			
PHY	101	Principles of Physics	3
MGT	224	Human Resource Management	3
IET	224	Product Planning and Inventory Control	2
SOC	121	Sociology	3
MKT	226	Purchasing	3
ACC	130	Business Law and Ethics	3
			17

70 TOTAL CREDIT HOURS

* Successful completion of OAD102, 104, 105 and 106 is equivalent to and may be substituted for CAP120.

† Based on SSCT placement score.

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Business Technologies

Career Enhancement Programs*

Stark State College recognizes that not all students will seek an associate's degree. Individuals might 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 has developed "career enhancement" programs which document a student's proficiency in a variety of knowledge areas. The following series of courses 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 also available for companies.

Students who decide to enroll in an associate degree program may apply these courses toward the degree if it is in the same area of study. Application for the "career enhancement" program should be made to the appropriate department head or academic dean.

Accounting and Finance

Financial Accounting	Quantitative Methods of Accounting and Finance (ACC127) Financial Accounting (ACC132) Intermediate Accounting I (ACC221) Intermediate Accounting II (ACC222)
Managerial Accounting	Quantitative Methods of Accounting and Finance (ACC127) Financial Accounting (ACC132) Managerial Accounting (ACC133) Cost Accounting (ACC223)

Administrative Information

Records Management	Introduction to Records Management (REC121) Administrative Procedures and Systems (OAD227) Graphic Design Concepts (OAD131)
Rapid Data Transcription	CR Theory I (CCR121) CR Theory II (CCR122) Speed Building I (CCR129) Speed Building II (CCR 130-optional)
Legal Assisting	Legal Transcription (CCR128) Legal Office Procedures (OAD224) Legal Research and Writing (OAD235) Legal Office Applications (OAD237)
Desktop Publishing	Desktop Publishing–Microsoft Publisher (OAD128) Graphic Design Concepts (OAD131) Presentations – Microsoft PowerPoint (OAD233) Web Publishing - Microsoft Front Page (OAD238)

Computer Technology

Programming	Introduction to Computer Programming (CAP121) Systems Design and Development (CAP227) DP Field Project (CAP231) *Choose one of the following two course sequences:* Visual Basic Programming (CAP126) Advanced Visual Basic Programming (CAP246) Java Programming for Business (CAP241) Advanced Java Programming for Business (CAP247) C++ Programming for Business (CAP242) Advanced C++ Programming for Business (CAP235)
Database Administrator – Oracle	Introduction to Database Management Systems (CAP139) Database Administration (CAP142) Advanced Database Administration (CAP250) Database Network Architecture (CAP249)

Database Administrator – Microsoft SQL Server	Microsoft SQL Administration (CAP143) Advanced Microsoft SQL Administration (CAP255) Microsoft SQL Data Warehousing (CAP256) Data Modeling and Design (CAP133)
Database Programming	Introduction to Database Management Systems (CAP139) Database Development Tools (CAP141) Advanced Database Development Tools (CAP248) Data Modeling and Design (CAP133)
Novell Network Administrator	Networking Technologies (CAP253) Netware Administration (CAP136) Advanced Netware Administration (CAP251)
AS/400 Specialist	*Any five AS/400-based courses offered:* AS/400 Concepts and Facilities (CAP138) RPG/400 Programming I (CAP129) RPG/400 Programming II (CAP130) Advanced programming with RPG IV (CAP245) Relational Database using DB2/400 (CAP221) CL Programming (CAP244) Developing AS/400 Applications for the Internet (CAP254)
E-Business Programming Technology	
Web Application Developer	Visual Basic Programming (CAP126) Java Programming for Business (CAP241) Web Tools Design and Development (CAP243) Client Web Scripting (CAP258) Server Web Programming (CAP261)
Web Server Administrator	Networking Technologies (CAP253) Data Encryption and Firewall Technology (EET258) Web Server Administration (EET259) Linux Operating System (CAP259) MS Windows 2000, Server and Network (EET252)
Management and Marketing	
Quality Management	Quality Management (MGT229) Customer Service (MGT231) Quality Standards (MGT230) Production and Operations Management (MGT227)
International Business	International Trade (MGT232) International Banking (BUS223) International Law (ACC134)
Sales	Sales (MKT221) Sales Management (MGT226) Customer Service (MGT231) Purchasing (MKT226)
Supervision	Principles of Management (MGT121) First-Line Supervision (MGT221) Contemporary Management Issues (MGT225)

* 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 head or academic dean approval before completing the registration process. Non-degree seeking students may not be eligible for financial aid.

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.

ENGINEERING TECHNOLOGIES

Applied Industrial Technology
Welding Option

Automotive Engineering Technology
General Motors ASEP Option
Toyota T-Ten Certificate

Civil Engineering Technology
Architectural Major
Surveying Major

Computer Networking and Telecommunications Engineering Technology
Network Administration Option

Computer Science and Engineering Technology
Online Software Design Option
University of Toledo Transfer Option

Design Engineering Technology

E-Solutions Technology

Electric Power Utility Technology

Electrical Engineering Technology

Electrical Maintenance Technology

Electronic Engineering Technology

Environmental Technology

Heating, Ventilation and Air Conditioning Technology

Industrial Engineering Technology

Interactive Media Technology
Graphic Arts Design Option
Macromedia® Development Option
MIDI Option

Mechanical Engineering Technology

Engineering Technologies

Students majoring in engineering technologies may pursue the associate of applied science degree in a variety of engineering technology programs from computer science and engineering technology through traditional engineering technology programs. 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 operations and maintenance in manufacturing.

Prerequisite requirements for technical courses:

To meet the prerequisite requirement of a technical course (a course directly in the students field of study) the prerequisite course must be passed with a "C" or better. Final course in the technical sequence may be passed with a "D". This is required to improve student success in later courses.

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, with the degree referred to as the "2 + 2" degree in technology. Bachelor's degree requirements and course transferability are controlled by the institution to which the student plans to transfer.

BS in Computer Science and Engineering Technology from the University of Toledo:

The University of Toledo and Stark State College of Technology have formed a partnership to offer a bachelor of science degree completion program in computer science and engineering technology. All University of Toledo courses will be offered on the campus of Stark State College.

Participation in the program is for students who have completed either Stark State's computer science and engineering technology degree or the computer networking and telecommunications engineering technology degree.

Students interested in the four-year University of Toledo program offered on the Stark State College campus should talk to their Stark State advisors for more details and application information.

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

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

TECH PREP
A TECH PREP PARTICIPANT

FRANKLIN UNIVERSITY

Applied Industrial Technology

The applied industrial technology degree program offers careers in fields which include both basic and advanced manufacturing.

The program provides knowledge of traditional manufacturing methods as well as state-of-the art and emerging technologies. Areas of expertise include robotics, computer control and advanced materials and processes.

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

Thirteen credit hours of technical electives allows students to specialize in and apply credits toward the welding option.

Welding Option

The welding option is designed to meet the needs of the manufacturing industries.

With increasingly complex machine tools and industrial machinery, technicians must have greater knowledge, ability and skill than ever before – the kind of knowledge, ability and skill our program offers.

Students in the welding option get a working knowledge of traditional welding and manufacturing methods and new technologies, including lubrication, cleaning, inspection, alignment and other preventive maintenance procedures. They learn computer-controlled systems and newer methods, such as predictive maintenance.

Graduates can look forward to working as manufacturing technicians, mechanical technicians, service mechanics and field service technicians.

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

Applied Industrial Technology

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
MTH	101	Introduction to Algebra	4
ENG	124	College Composition†	3
EST	130	Electrical Circuits and Devices	4
EIT	123	Machine Tools	3
SOC	121	Sociology	3
			17
Semester II			
MTH	121	Intermediate Algebra and Trigonometry I	4
MST	121	Blueprint Reading	2
MST	122	Hydraulic and Pneumatic Principles	3
MET	123	Material Science	2
PHY	121	Physics I	4
MST	131	Statistical Process Control Charts	2
			17
Semester III			
ENG	122	Communication Theory	3
MST	123	Hydraulic and Pneumatic Applications	3
IET	228	Introduction to Robotics	2
PSY	121	General Psychology	3
ECA	121	Introduction to Engineering Computer Applications	2
MET	225	Manufacturing Processes	3
			16
Semester IV			
BUS	122	Basic Economics	3
MST	221	Mechanical Drive Components	3
		Technical Electives*	10
			16

66 TOTAL CREDIT HOURS

* Students should consult with the program coordinator to select technical electives in specialized welding option.
† Based on SSCT placement score.

Welding Option

SUGGESTED COURSE SEQUENCE

			Credit Hours
MST	127	Principles of Welding	3
MST	128	Welding Lab	4
MST	226	Tungsten Inert Gas (TIG)	3
MST	227	Metallic Inert Gas (MIG/FCAW)	3
MST	228	Shielded Metal Arc I	3

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Automotive Engineering 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 engineering technology program consists of three options: the comprehensive automotive engineering technology program, the General Motors automotive service educational program, and the Toyota T-TEN certificate program. (Refer to pages 70 and 71 for additional information.)

Stark State's automotive engineering technology (ATE) 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 AET programs will be well prepared for a career as a service technician, dealership service advisor, service or parts manager, independent service facility operator, factory service representative, insurance claims adjuster or lab test technician. If the student wishes to pursue a four-year degree after graduating from the program, they may transfer their Stark State credits to many area colleges and universities.

In 1998, Stark State's comprehensive automobile program was rated first in the state of Ohio, and second among all post-secondary automotive engineering technology programs in the nation, by the Industry Planning Council of the American Automobile Manufacturers Association (AAMA).

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

The automotive programs are fully accredited by the National Automotive Technicians Education Foundation (NATEF).

Graduates of the comprehensive, and GM ASEP programs will receive an associate degree in applied science in automotive engineering 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 Engineering Technology

Comprehensive Automotive Program

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

The curriculum is designed to provide the student with information about the service and repairs 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, Isuzu, and Mazda, etc.).

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

Students graduating from the Comprehensive Program will receive an associate degree in applied science in automotive engineering technology.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
AUT	121	Automotive Technical Skills	2
AUT	122	Automotive Systems and Engine Technology	4
AUT	123	Engine Diagnosis and Major Service	4
ENG	124	College Composition†	3
MTH	101	Introduction to Algebra	4
			17
Semester II			
AUT	124	Vehicle Chassis Systems	4
AUT	125	Automotive Electrical and Accessory Systems	4
AUT	126	Automotive HVAC Systems	2
MTH	123	Intermediate Algebra	3
PHY	101	Principles of Physics	4
SPH	122	Inter-group Communications	3
			20
Semester III			
AUT	221	Fuel and Emissions Management Systems	3
AUT	222	Engine Systems Performance Diagnosis	3
AUT	223	Advanced Automotive Electronics	3
AUT	224	Automotive Diesel Systems	2
BUS	122	Basic Economics	3
DET	123	Technical Graphics	1
ECA	121	Introduction to Engineering Computer Applications	2
			17
Semester IV			
AUT	225	Automotive Drivetrains I	3
AUT	226	Automotive Drivetrains II	3
AUT	227	Computerized Vehicle Controls	3
AUT	228	Automotive Service Management*	
AUT	229	Automotive Maintenance Welding*	2
AUT	230	Technical Project*	
AUT	233	Automotive Diagnostic Applications	2
ENG	221	Technical Report Writing	3
ACC	130	Business Law and Ethics	3
			19

73 SEMESTER CREDITS

* Electives: Select from AUT228, AUT229, or AUT230
† Based on SSCT placement score.

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Automotive Engineering Technology

GM ASEP Program

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 26 GM-Stark State training courses.

Students graduating from GM ASEP will receive an associate degree in applied science in automotive engineering technology. They will also receive training credit for over 26 GM-Stark State training courses.

General Motors ASEP Option

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
AUT	121	Automotive Technical Skills (GM ASEP)	2
AUT	122	Automotive Systems and Engine Technology (GM ASEP)	4
AUT	123	Engine Diagnosis and Major Service (GM ASEP)	4
ENG	124	College Composition†	3
MTH	101	Introduction to Algebra	4
ETD	222	Engineering Technology Co-op (GM ASEP)	2
			19
Semester II			
AUT	124	Vehicle Chassis Systems (GM ASEP)	4
AUT	125	Automotive Electrical and Accessory Systems (GM ASEP)	4
BUS	122	Basic Economics	3
MTH	123	Intermediate Algebra	3
ETD	222	Engineering Technology Co-op (GM ASEP)	2
			16
Summer Semester			
DET	123	Technical Graphics	1
AUT	126	Automotive HVAC Systems (GM ASEP)	2
ETD	222	Engineering Technology Co-op (GM ASEP)	2
			5
Semester III			
SPH	122	Inter-group Communications	3
AUT	221	Fuel and Emission Management Systems (GM ASEP)	3
AUT	223	Advanced Automotive Electronics (GM ASEP)	3
AUT	227	Computerized Vehicle Controls (GM ASEP)	3
ECA	121	Introduction to Engineering Computer Applications	2
ETD	222	Engineering Technology Co-op (GM ASEP)	2
			16
Semester IV			
ACC	130	Business Law and Ethics	3
ENG	221	Technical Report Writing	3
AUT	222	Engine Systems Performance Diagnosis (GM ASEP)	3
AUT	225	Automotive Drivetrains I (GM ASEP)	3
AUT	226	Automotive Drivetrains II (GM ASEP)	3
ETD	222	Engineering Technology Co-op (GM ASEP)	2
			17

73 SEMESTER CREDITS

† Based on SSCT placement score.

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Automotive Engineering Technology

Toyota T-TEN Program

The Toyota technical education network program (T-TEN) is a one-year accelerated certificate of completion program. It is designed exclusively for the student who is seeking a career as a service technician with Toyota Motor Sales USA.

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.

The T-TEN curriculum places a strong emphasis on Toyota vehicles and Toyota vehicle repair information.

The T-TEN program is a fast way to jump start your career. Students desiring to complete an associate degree need only take 24 additional credit hours of coursework. The program provides the student with eight of the 13 certification courses necessary to become a certified master toyota technician.

Toyota T-TEN Certification of Completion

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
AUT	121	Automotive Technical Skills (Toyota T-TEN)	2
AUT	122	Automotive Systems and Engine Technology (Toyota T-TEN)	4
AUT	124	Vehicle Chassis Systems (Toyota T-TEN)	6
AUT	125	Automotive Electrical and Accessory Systems (Toyota T-TEN)	4
ETD	224	Engineering Technology Co-op (Toyota T-TEN)	4
			20
Semester II			
AUT	123	Engine Diagnosis and Major Service (Toyota T-TEN)	4
AUT	126	Automotive HVAC (Toyota T-TEN)	2
AUT	221	Fuel Emission Management Systems (Toyota T-TEN)	3
AUT	223	Advanced Automotive Electronics (Toyota T-TEN)	3
AUT	227	Computerized Engine Controls (Toyota T-TEN)	3
ETD	224	Engineering Technology Co-op (Toyota T-TEN)	4
			19
Semester III			
AUT	222	Engine System Performance Diagnosis (Toyota T-TEN)	3
AUT	225	Automotive Drivetrains I (Toyota T-TEN)	3
AUT	226	Automotive Drivetrains II (Toyota T-TEN)	3
AUT	223	Automotive Diagnosis Applications (Toyota T-TEN)	2
ETD	224	Engineering Technology Co-op (Toyota T-TEN)	4
			15

54 SEMESTER CREDITS

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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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			
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
PHY	121	Physics I	4
CET	121	Building Materials and Construction Methods	3
CET	122	Architectural Drafting I	3
BUS	122	Basic Economics	3
			20
Semester II			
MTH	122	Intermediate Algebra and Trigonometry II	3
PHY	122	Physics II	4
MET	124	Statics and Strengths of Materials	4
ECA	122	Engineering Computer Applications	2
CET	125	Soil Mechanics	3
CET	124	Highway and Map Drawing	2
			18
Semester III			
ENG	221	Technical Report Writing	3
MTH	221	Concepts of Calculus	3
CET	227	Surveying I	3
CET	223	Structural Design I	3
CET	222	Concrete and Asphalt Testing	3
CET	232	Land Planning and Design	3
			18
Semester IV			
SPH	122	Inter-group Communications	3
CET	226	Estimating	3
CET	224	Structural Design II	3
CET	225	Building Service Systems	3
CET	228	Surveying II	3
ACC	130	Business Law and Ethics	3
			18

74 TOTAL CREDIT HOURS

† Based on SSCT placement score.

TECH PREP

A TECH PREP PARTICIPANT

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Civil Engineering Technology

Architectural Major

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			
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
PHY	121	Physics I	4
CET	121	Building Materials and Construction Methods	3
CET	122	Architectural Drafting I	3
BUS	122	Basic Economics	3
			20
Semester II			
MTH	122	Intermediate Algebra and Trigonometry II	3
PHY	122	Physics II	4
MET	124	Statics and Strengths of Materials	4
ECA	122	Engineering Computer Applications	2
CET	123	Architectural Drafting II	3
DET	125	Basic AutoCAD	3
			19
Semester III			
ENG	221	Technical Report Writing	3
MTH	221	Concepts of Calculus	3
CET	227	Surveying I	3
CET	223	Structural Design I	3
CET	232	Land Planning and Design	3
CET	235	Project Administration	3
			18
Semester IV			
SPH	122	Inter-group Communications	3
CET	226	Estimating	3
CET	225	Building Service Systems	3
CET	233	Architectural Design	3
CET	234	A/E CAD	2
ACC	130	Business Law and Ethics	3
			17

74 TOTAL CREDIT HOURS

† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Civil Engineering Technology

Surveying Major

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			
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
PHY	121	Physics I	4
CET	121	Building Materials and Construction Methods	3
CET	227	Surveying I	3
BUS	122	Basic Economics	3
			20
Semester II			
MTH	122	Intermediate Algebra and Trigonometry II	3
PHY	122	Physics II	4
MET	124	Statics and Strengths of Materials	4
ECA	122	Engineering Computer Applications	2
CET	124	Highway and Map Drawing	2
CET	228	Surveying II	3
			18
Semester III			
ENG	221	Technical Report Writing	3
MTH	221	Concepts of Calculus	3
CET	222	Concrete and Asphalt Testing	3
CET	232	Land Planning and Design	3
CET	231	Legal Principles of Surveying	3
DET	125	Basic AutoCAD	3
			18
Semester IV			
SPH	122	Inter-group Communications	3
CET	226	Estimating	3
CET	229	Surveying III	3
CET	221	Surveying Graphics	3
CET	236	Global Positioning System	3
ACC	130	Business Law and Ethics	3
			18

74 TOTAL CREDIT HOURS

† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Computer Networking and Telecommunications Engineering Technology

Information technology is one of the hottest new career areas. This program provides students with information on computer networking, electronics and telemarketing and board-level functioning of computers. Students gain an understanding of software systems and software interaction. The computer, computer network and telecommunications are addressed as an interactive system.

The telecommunications information covers voice, video and data communications. It addresses the generation of the electrical signals; their transmission by various means; signal receiving and decoding; and information output.

The outlook for the future is extremely positive! A recent study by the Ohio Bureau of Employment Services shows that four of the 12 fastest-growing occupations in Ohio are in computer networking and telecommunications. All of these four occupations are projected to grow more than 50% in the next 10 years.

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			
ECA	122	Engineering Computer Applications (8W 2)	2
EET	120	DC Circuit Analysis	4
EET	121	Technology Survey	1
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
PHY	121	Physics I	4
			18
Semester II			
EET	131	PC Upgrading and Maintenance	3
ECA	125	Introduction to Networking	2
EET	123	Electronic Devices and Circuits	3
EET	129	Optics	2
MTH	122	Intermediate Algebra and Trigonometry II	3
SPH	122	Inter-group Communications	3
EET	122	AC Circuit Analysis	4
			20
Semester III			
BUS	122	Basic Economics	3
EET	252	MS Win2000 Professional, Server and Network Infrastructure	3
EET	221	Pulse, Logic and Switching Circuits (8W 1)	3
EET	222	Digital Integrated Circuits (8W 2)	3
EET	248	Workstation Interfacing (8W 2)	2
ACC	130	Business Law and Ethics	3
MTH	221	Concepts of Calculus	3
			20
Semester IV			
CAP	136	Local Area Networking*	3
ECA	223	Java Programming*	3
EET	257	UNIX Operating Environment*	3
EET	253	Implementing and Administering MS Win2000 Directory Services (8W 1)*	2
EET	254	Designing an MS Win2000 Directory Services Infrastructure (8W 2)*	2
EET	255	Designing an MS Win2000 Network Services Infrastructure (8W 2)*	2
EET	256	Designing a Secure MS Win2000 Network (8W 2)*	2
EET	245	Technical Project – Electronic Telecommunications*	3
EET	242	Microsoft SQL Server	3
ENG	242	Technical Report Writing	3
EET	244	Electronic Telecommunications	3
			15

73 TOTAL CREDIT HOURS

TECH PREP
A TECH PREP PARTICIPANT

* Select 6 credit hours of electives
† Based on SSCT placement score.

(8W 1) = 8-week course 1st 8 weeks
(8W 2) = 8-week course 2nd 8 weeks

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Computer Networking and Telecommunications Engineering Technology

Network Administration Option

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 both 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.

When hundreds of new software applications hit the market, graduates with this program option will already have the ability to take full competitive advantage above the rest. This course of study provides graduates with the technical information to get the task accomplished and be successful in the field of network administration.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
EET	131	PC Upgrading and Maintenance	3
EET	141	Introduction to Computer Networking	2
MTH	121	Intermediate Algebra and Trigonometry I	4
ENG	124	College Composition†	3
ECA	228	Internet/Intranet Software Design Applications I	2
			16
Semester II			
EET	252	MS Win2000 Professional, Server and Network Infrastructure	3
EET	257	UNIX Operating Environment	3
EET	120	DC Circuit Analysis	4
MTH	122	Intermediate Algebra and Trigonometry II	3
PHY	121	Physics I	4
			17
Semester III			
EET	253	Implementing and Administering MS Win2000 Directory Services (8W 1)	2
EET	254	Designing an MS Win2000 Directory Services Infrastructure (8W 2)	2
EET	250	UNIX System Administration	3
EET	129	Optics	2
ECA	127	Software Engineering Principles	3
ACC	130	Business Law and Ethics	3
BUS	122	Basic Economics	3
			18
Semester IV			
EET	259	Web Server Administration	3
EET	255	Designing an MS Win2000 Network Services Infrastructure (8W 2)	2
EET	256	Designing a Secure MS Win2000 Network (8W 2)	2
EET	242	Microsoft SQL Server	3
EET	122	AC Circuit Analysis	4
ENG	221	Technical Report Writing	3
SPH	122	Inter-group Communications	3
			20

71 TOTAL CREDIT HOURS

(8W 1) = 8-week course 1st 8 weeks
(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

TECH PREP
A TECH PREP PARTICIPANT

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Computer Science and Engineering Technology

One of the newest offerings at Stark State College, the computer science and engineering technology program has been established to meet the burgeoning demand in Northeastern Ohio for software engineers, programmers/analysts and technical computer software consultants. The computer science and engineering technology program is accompanied by two options, the online software design technologies option and the University of Toledo transfer option, allowing a total of three curriculum paths.

There is currently a tremendous demand for individuals who know how to use Object Oriented Programming (OOP) languages to develop software in the following OOP languages: Java, Visual C++ and Visual Basic. Students may specialize in either Visual Basic or Visual C++. Many of the courses in this curriculum prepare individuals for certification exams found in Microsoft's MCSD professional certification sequence. This option allows students to get a degree and prepare for MCSD at the same time. Stark State is an authorized academic training program (AATP) for Microsoft. This means that students can take courses that will prepare them for Microsoft certification tests which can be taken at Stark State College.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
ECA	228	Internet/Intranet Software Design I	2
ENG	124	College Composition†	3
PHY	121	Physics I	4
MTH	121	Intermediate Algebra and Trigonometry I	4
BUS	122	Basic Economics	3
			18
Semester II			
ECA	127	Software Engineering Principles	3
ECA	***128***	***Intermediate Desktop Applications with Visual Basic***	***3***
ECA	125	Introduction to Networking	2
EET	129	Optics	2
ENG	221	Technical Report Writing	3
MTH	122	Intermediate Algebra and Trigonometry II	3
			16
Semester III			
ECA	222	Introduction to C++ Programming	3
ECA	223	Java Programming in Computer Science	3
ACC	130	Business Law and Ethics	3
SPH	122	Inter-group Communications	3
MTH	221	Concepts of Calculus	3
			15
Semester IV			
ECA	***226***	***Visual C++ The Foundation Classes****	***3***
ECA	221	Operating Systems for Software Developers	3
ECA	231	Data Acquisitions/Analysis	3
ECA	***230***	***Database Design/Interface for Developers***	***3***
ECA	***224***	***Software Engineering Design and Development with COM****	***3***
ECA	***234***	***Distributed Applications with Visual Basic****	***3***
ECA	235	Advanced Java Programming for Software Engineering Applications*	3
EET	***233***	***Analyzing Software Requirements and Developing Solutions***	***3***
			18

67 TOTAL CREDIT HOURS

(8W 2) = 8-week course 2nd 8 weeks
* Select 6 credit hours of electives
† Based on SSCT placement score.

A TECH PREP PARTICIPANT

Bold italicized courses indicate courses that contain content for MSCD certification.

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Computer Science and Engineering Technology

Online Software Design Option

This associate degree option prepares students to develop software for the Internet and company-wide intranets. Most companies are setting up intranets to display company information in each of their departments. Students will learn how to set up an intranet, develop software application for the Internet and for intranets, manage a Web server, organize files and directories, use scripting languages, become fluent in several Web-based languages, become familiar with a fair number of Web development tools, and become a competent Webpage developer. Along the way, while taking classes that satisfy the degree requirements, students will have the opportunity to finish two certificates of completion from Stark State college: ECA 122, ECA223, ECA228 qualify students to receive a certificate from Stark State College as a Webpage developer. ECA225, ECA229 and ECA232 qualify students to receive a certificate from Stark State College as an advanced webmaster. Some students aren't interested in completing a degree, rather they skill-shop, selecting courses to complete the requirements for certificates. All of the courses found in the two webmaster certificates do, however, contribute to the associate degree in computer science and engineering technology, the online software design option.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W2)	2
ECA	228	Internet/Intranet Software Design I	2
ENG	124	College Composition†	3
PHY	121	Physics I	4
MTH	121	Intermediate Algebra and Trigonometry I	4
BUS	122	Basic Economics	3
			18
Semester II			
ECA	127	Software Engineering Principles	3
ECA	126	Interactive Media	3
ECA	***229***	***Internet/Intranet Software Design II***	***3***
EET	129	Optics	2
MTH	122	Intermediate Algebra and Trigonometry II	3
ECA	125	Introduction to Networking	2
			16
Semester III			
ECA	222	Introduction to C++ Programming	3
ECA	225	Applied Interactive Software Engineering Development	3
ECA	223	Java Programming for Computer Science	3
ACC	130	Business Law and Ethics	3
ENG	221	Technical Report Writing	3
SPH	122	Inter-group Communications	3
			18
Semester IV			
ECA	221	Operating Systems for Software Developers	3
ECA	232	Design and Development of E-Commerce Sites	3
ECA	128	Intermediate Desktop Applications with Visual Basic	3
ECA	230	Database Design/Interface for Developers	3
MTH	221	Concepts of Calculus	3
			15

67 TOTAL CREDIT HOURS

(8W2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

Bold italicized courses indicate courses that contain content for MCSD certification.

A TECH PREP PARTICIPANT

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Computer Science and Engineering Technology

Transfer Option to the University of Toledo

Interested in a bachelor of science degree? The University of Toledo also has a computer science and engineering technology degree program that offers a bachelor of science degree which can be completed at Stark State. Students must complete two years required for an associate degree from Stark State in computer science and engineering technology. Then, students take courses at Stark State (even though some of the courses are available over the Internet) for two more years and receive a bachelor of science (BS) degree from the University of Toledo in computer science and engineering technology.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
EET	120	DC Circuit Analysis	4
ENG	124	College Composition†	3
PHY	121	Physics I	4
MTH	121	Intermediate Algebra and Trigonometry I	4
			17
Semester II			
ECA	127	Software Engineering Principles	3
ECA	125	Introduction to Networking	2
MTH	122	Intermediate Algebra and Trigonometry II	3
BUS	122	Basic Economics	3
SPH	122	Inter-group Communications	3
EET	122	AC Circuit Analysis	4
			18
Semester III			
ECA	222	Introduction to C++ Programming	3
ECA	223	Java Programming in Computer Science	3
ECA	228	Internet/Intranet Software Design Applications I	2
ACC	130	Business Law and Ethics	3
EET	129	Optics	2
EET	123	Electronic Devices and Circuits	3
			16
Semester IV			
ECA	221	Operating Systems for Software Developers	3
ECA	128	Intermediate Desktop Applications with Visual Basic	3
ECA	227	Assembly Language	3
ECA	230	Database Design/Interface for Developers	3
ENG	221	Technical Report Writing	3
MTH	221	Concepts of Calculus	3
			18

69 TOTAL CREDIT HOURS

(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

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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			
DET	121	Engineering Drawing	3
SPH	122	Inter-group Communications	3
MET	121	Introduction to Design and Mechanical Engineering Technologies	2
MTH	121	Intermediate Algebra and Trigonometry I	4
PHY	121	Physics I	4
			16
Semester II			
DET	122	Descriptive Geometry	3
DET	124	Working Drawings	3
DET	125	Basic AutoCAD	3
MTH	122	Intermediate Algebra and Trigonometry II	3
PHY	122	Physics II	4
ACC	130	Business Law and Ethics	3
			19
Semester III			
DET	231	Tool Design	3
ENG	124	College Composition†	3
MET	225	Manufacturing Processes *or* Plastic Product and Tool Design (IET255)	3
MET	124	Statics and Strengths of Materials	4
MTH	221	Concepts of Calculus	3
		Design Elective I	3
			19
Semester IV			
DET	223	Kinematics or Dynamics (MET223)	3
DET	224	Mechanical Systems	3
DET	226	Geometric Dimensioning and Tolerancing	2
BUS	122	Basic Economics	3
ENG	221	Technical Report Writing	3
		Design Elective II	3
			17

71 TOTAL CREDIT HOURS

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A TECH PREP PARTICIPANT

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Electric Power Utility Technology*

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 technical studies.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	121	Introduction to Engineering Computer Applications	4
MTH	101	Introduction to Algebra	4
ENG	124	College Composition†	3
EUT	121	Overhead Line Technology I	6
			15
Semester II			
MTH	121	Intermediate Algebra and Trigonometry I	4
EET	120	DC Circuit Analysis	4
SPH	122	Inter-group Communications	3
EUT	122	Overhead Line Technology II	6
			17
Semester III			
ETD	202	Engineering Technology Division - Independent Study	2
			2
Semester IV			
PHY	101	Principles of Physics	4
EET	128	NEC and Electrical Systems Design	2
EST	131	AC Fundamentals	2
ACC	130	Business Law and Ethics	3
EUT	221	Overhead Line Technology III	6
			17
Semester V			
EUT	223	Electrical Power Transmission and Distribution	3
ENG	221	Technical Report Writing	3
BUS	122	Basic Economics	3
EST	129	Switchgear, Transformers and Controls	2
EUT	222	Overhead Line Technology IV	7
			18

69 TOTAL CREDIT HOURS

* This program is only available to students who have satisfied the requirements of FirstEnergy.
† Based on SSCT placement score.

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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.

Students interested in pursuing the "2 + 3" bachelor of science in electrical engineering (B.S.E.E.) degree should consult their academic advisor prior to initial enrollment in the courses.

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.

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Electrical Engineering Technology

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
DET	123	Technical Graphics	1
EET	120	DC Circuit Analysis	4
EET	121	Technology Survey	1
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
PHY	121	Physics I	4
			17
Semester II			
EET	122	AC Circuit Analysis	4
EET	123	Electronic Devices and Circuits	3
EET	125	Circuit Manufacturing Techniques (8W 1)	1
EET	126	Electrical Machines I	3
EET	129	Optics	2
ECA	122	Engineering Computer Applications (8W 2)	2
SPH	122	Inter-group Communications	3
MTH	122	Intermediate Algebra and Trigonometry II	3
			21
Semester III			
EET	127	Electrical Machines II	4
EET	128	NEC and Electrical Systems Design (8W 2)	2
EET	131	PC Upgrading and Maintenance	3
EET	227	Industrial Controls I	3
MTH	221	Concepts of Calculus	3
ACC	130	Business Law and Ethics	3
			18
Semester IV			
EET	226	Transmission and Distribution	3
EET	228	Industrial Controls II	3
EET	229	Electronic Drafting	1
EET	232	Industrial Electronics	3
EET	223	Technical Project – Electrical	1
BUS	122	Basic Economics	3
ENG	221	Technical Report Writing	3
			17

73 SEMESTER CREDITS

(8W 1) = 8-week course 1st 8 weeks
(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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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 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 fundamentals, digital electronics, electrical and electronic trouble-shooting, digital communications, transformers, National Electric Code, electrical machines, industrial controls, programmable controllers, hydraulics, pneumatics and refrigeration. 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.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
EET	120	DC Circuit Analysis	4
EET	121	Technology Survey	1
EST	129	Switchgear, Transformers and Control (8W 2)	2
ECA	122	Engineering Computer Applications (8W 2)	2
PHY	121	Physics I	4
MTH	121	Intermediate Algebra and Trigonometry I	4
			17
Semester II			
EET	125	Circuit Manufacturing Techniques (8W 1)	1
EET	129	Optics	2
EST	122	Semiconductor Devices *or* Electronic Devices and Circuits (EET123)	3
EST	128	Digital Electronics	3
ENG	124	College Composition†	3
SPH	122	Inter-group Communications	3
EST	131	AC Fundamentals	4
			19
Semester III			
EET	128	NEC and Electrical Systems Design (8W 2)	2
EET	227	Industrial Controls I	3
EST	221	Electronic Troubleshooting	3
EET	131	PC Upgrading and Maintenance	3
EST	223	Electrical Machines (8W 1)	3
ACC	130	Business Law and Ethics	3
MST	223	Hydraulics and Pneumatics (8W 1 or 16W)	2
			19
Semester IV			
EET	228	Industrial Controls II	3
EET	232	Industrial Electronics	3
EET	244	Electronic Telecommunications	3
BUS	122	Basic Economics	3
ENG	221	Technical Report Writing	3
IET	260	HVAC Principles	3
			18

73 TOTAL CREDIT HOURS

(8W 1) = 8-week course 1st 8 weeks
(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

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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: customer service technician, process control technician, field engineering specialist and electronic technician.

Students interested in pursuing the "2 + 3" bachelor of science in electrical engineering (B.S.E.E.) degree should consult their academic advisor prior to initial enrollment in the courses.

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			
DET	123	Technical Graphics	1
EET	120	DC Circuit Analysis	4
EET	121	Technology Survey	1
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry	4
PHY	121	Physics I	4
			17
Semester II			
ECA	122	Engineering Computer Applications (8W 2)	2
EET	123	Electronic Devices and Circuits	3
EET	125	Circuit Manufacturing Techniques (8W 1)	1
EET	129	Optics	2
SPH	122	Inter-group Communications	3
MTH	122	Intermediate Algebra and Trigonometry II	3
EET	122	AC Circuit Analysis	4
			18
Semester III			
EET	221	Pulse, Logic and Switching Circuits (8W 1)	3
EET	222	Digital Integrated Circuits (8W 2)	3
EET	131	PC Upgrading and Maintenance	3
EET	248	Workstation Interfacing (8W 2)	2
EET	230	Electronic Circuits I	3
MTH	221	Concepts of Calculus	3
ACC	130	Business Law and Ethics	3
			20
Semester IV			
EET	225	Digital Communications and Systems Analysis	3
EET	231	Electronic Circuits II	3
EET	232	Industrial Electronics	3
EET	234	Electronic Drafting	1
EET	235	Technical Project – Electronic	1
ENG	221	Technical Reporting Writing	3
BUS	122	Basic Economics	3
			17

72 TOTAL CREDIT HOURS

A TECH PREP PARTICIPANT

† Based on SSCT placement score.

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Environmental Technology

The associate of applied science degree in environmental 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 environmental 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 environmental program will be uniquely qualified to meet the needs of both the private and public sectors as they face growing environmental regulation and concern.

A graduate of this program will receive an associate of applied science degree in environmental technology.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
MTH	121	Intermediate Algebra and Trigonometry I	4
ENG	124	College Composition†	3
BIO	126	Science, Energy and the Environment	4
ENV	101	Environmental Studies Seminar	1
CHM	121	General Chemistry	4
BUS	122	Basic Economics	3
			19
Semester II			
CHM	122	Organic and Biological Chemistry	4
MTH	222	Statistics	3
ECA	122	Engineering Computer Applications	2
ENV	221	Occupational Safety and Health Act - 40 hours Compliance Class - 40-hour HAZWOPER	2
MET	225	Manufacturing Processes	3
ENV	121	Regulations/Compliance I	3
			17
Semester III			
ENV	222	Environmental Systems	3
ENV	223	Basic Geology/Hydrology	3
ENV	224	Air Sampling, Analysis, and Control	3
ACC	130	Business Law and Ethics	3
SPH	122	Inter-group Communications	3
ENV	227	Laboratory Instrumentation (Environmental Elective)*	3
			18
Semester IV			
ENV	236	Technical Project (Computer Environmental Applications)	2
ENG	221	Technical Report Writing	3
ENV	225	Solid and Hazardous Waste Sampling, Analysis and Management	3
ENV	226	Water Sampling, Analysis, and Control	3
ENV	228	Health and Safety	3
ENV	229	Regulations/Compliance II (Environmental Elective)*	3
ENV	230	OSHA 8-hour Refresher	1
			18

68/69 TOTAL CREDIT HOURS

* Only one of the Environmental electives is required.
† Based on SSCT placement score.

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E-Solutions Information Technology

This program provides students with information in both computer networking and computer programming fields. In today's "E" world it is important to have skills in the software and networking fields. The answer is the integration of E-solutions. E-solutions is part of the basic DNA of every business whether it is a local or national Fortune 500 company, regardless of size, industry or sophistication. In order to meet the new demand of a faster more productive, competitive, innovative business world, they have to have superior personnel to design, develop, manage and integrate this new technology.

In the networking area, students will focus on the latest Web server technologies that power the Internet. While in the software area, students will focus on the software technologies and applications used by a large majority of the most popular Internet sites of today.

E-solutions technology will provide the training and knowledge required to assume the positions necessary to accomplish this goal. This program will help graduates step directly into this high-tech career field.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
EET	131	PC Upgrading and Maintenance	3
EET	141	Introduction to Computer Networking	2
ECA	127	Software Engineering Principles	3
ECA	228	Internet/Intranet Software Design Applications I	2
			19
Semester II			
ECA	222	Introduction to C++ Programming	3
ECA	229	Internet/Intranet Software Design Applications II	3
EET	252	MS Win2000 Professional, Server and Network Infrastructure	3
EET	257	UNIX Operating Environment	3
ECA	225	Applied Interactive Software Engineering Development	3
ACC	130	Business Law and Ethics	3
			18
Semester III			
SPH	122	Inter-group Communications	3
PHY	121	Physics I	4
EET	253	Implementing and Administering MS Win2000 Directory Services (8W 1)	2
EET	256	Designing a Secure MS Win2000 Network (8W 2)	2
EET	250	UNIX System Administration	3
ECA	236	Internet/Intranet Software Design Applications III	3
			17
Semester IV			
BUS	122	Basic Economics	3
EET	242	Microsoft SQL Server	3
ENG	221	Technical Report Writing	3
EET	258	Data Encryption and Firewall Technology	3
EET	259	Web Server Administration	3
ECA	223	Java Programming in Computer Science*	3
ECA	234	CFML Tools and Design*	3
ECA	237	Web Server Programming with C++*	3
			18

71/72 TOTAL CREDIT HOURS

(8W 1) = 8-week course 1st 8 weeks
(8W 2) = 8-week course 2nd 8 weeks
* Must select an elective
† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Heating, Ventilating, and Air Conditioning Technology

Today's heating, ventilation, and air conditioning (HVAC) industry makes possible the food we eat, our unparalleled medical capabilities, and our home comfort. In fact, it supports almost every component of our way of life. The HVAC industry is growing and becoming more 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.

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			
ENG	124	College Composition†	3
MTH	101	Introduction to Algebra	4
HVC	121	HVAC Principles I	3
EST	130	Electrical Circuits and Devices	4
CET	121	Building Materials and Construction	3
			17
Semester II			
ECA	121	Introduction to Engineering Computer Applications	2
ACC	127	Quantitative Methods of Accounting and Finance	4
HVC	123	Sheet Metal Layout I	3
HVC	122	HVAC Principles II	3
PHY	101	Principles of Physics	4
BUS	122	Basic Economics	3
			19
Semester III			
HVC	221	HVAC Furnace Combustion Principles	2
HVC	222	HVAC Design and Application	3
HVC	223	HVAC System Operation and Troubleshooting I	3
EET	227	Industrial Controls I	2
SPH	122	Inter-group Communications	3
ACC	130	Business Law and Ethics	3
			16
Semester IV			
HVC	225	Construction Site Safety or Selected Technical Elective	1
HVC	226	Sheet Metal Layout II	3
HVC	224	HVAC System Operation and Troubleshooting II	3
MGT	222	Small Business Management	3
ENG	221	Technical Report Writing	3
HVC	232	Advanced HVAC Applications OR	
HVC	227	HVAC Field Installation Techniques and Procedures	3-4
			16/17

68/69 TOTAL CREDIT HOURS

† Based on SSCT placement score.

TECH PREP

A TECH PREP PARTICIPANT

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Heating, Ventilating, and Air Conditioning Technology

Certificate Programs

The HVAC technician program prepares each technician to work in the HVAC trade as a trainee or as an entry-level technician. Emphasis is placed upon familiarization of HVAC systems and safety in the workplace.

HVAC TECHNICIAN (Level I)

Prerequisite: MTH101 or passing score on Compass Algebra Test

			Credit Hours
HVC	121	HVAC Principles I	3
HVC	122	HVAC Principles II	3
HVC	223	HVAC System Operation and Troubleshooting I	3
EST	130	Electrical Circuits and Devices	4
			13

HVAC TECHNICIAN (Level II)

Prerequisite: Successful completion of HVAC Technician Level I Credit Certificate Program

			Credit Hours
HVC	222	HVAC Design and Application	3
HVC	224	HVAC System and Operation and Troubleshooting II	3
HVC	227	HVAC Field Installation Techniques and Procedures	4
EET	227	Industrial Controls I	2
			12

HVAC DESIGN AND APPLICATION TECHNICIAN

Prerequisite: Successful completion of HVAC Technician Level I Credit Certificate Program

			Credit Hours
HVC	222	HVAC Design and Application	3
HVC	232	Advanced HVAC Applications	3
HVC	233	HVAC Bid Specification	3
CET	121	Building Materials and Construction	3
			12

TECH PREP

A TECH PREP PARTICIPANT

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Industrial Engineering Technology

Industrial engineering technology combines a strong foundation in engineering technology with the fundamental concepts of industrial management (processes, people and manufacturing methods) placing a strong emphasis on quality and continuous improvement throughout.

A strong technical foundation is built in such areas as: statistics, engineering drawing, geometric dimensioning and tolerancing and engineering computer applications (spreadsheets, word processing and presentation applications).

Industrial management coursework focuses on developing an understanding of the integration of processes, people and manufacturing methods to continuously improve both quality and productivity. Since quality is an underlying element in this discipline, students receive additional quality coursework in Introduction to Quality and Dimensional Metrology and Inspection I.

Stark State offers this comprehensive program with two areas of specialization.

- Students interested in the global functions of production management follow ***set two electives*** shown below.
- Students wishing to focus on quality follow ***set one electives*** shown below. The completion of the industrial engineering technology program with these courses prepares students for the certified quality technician exam offered through the American Society for Quality (ASQ).

In today's competitive environment, an ongoing focus on process improvement is critical. Graduates fill a wide variety of positions, such as: manufacturing foremen and supervisors, process analysts, industrial engineering technicians, field sales representatives, production schedulers and quality assurance analysts.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
IET	125	Introduction to Quality	2
DET	121	Engineering Drawing	3
MET	123	Material Science	2
MTH	121	Intermediate Algebra and Trigonometry I	4
BUS	122	Basic Economics	3
ENG	124	College Composition†	3
			17
Semester II			
IET	121	Industrial Management Concepts	3
MET	225	Manufacturing Processes	3
MTH	222	Statistics	3
ECA	122	Engineering Computer Applications	2
PHY	121	Physics I	4
SPH	122	Inter-group Communications	3
			18
Semester III			
IET	221	Work Management	2
IET	222	Statistical Quality Control	3
IET	268	Process Improvement, Methods, and Measurements	3
IET	270	Dimensional Metrology and Inspection I	2
EST	130	Electrical Circuits and Devices	4
ENG	221	Technical Report Writing	3
			20
Semester IV			
IET	224	Production Planning and Inventory Control	2
IET	226	Plant Layout	3
IET	267	IET Capstone	1
DET	226	Geometric Dimensioning and Tolerancing	2
ACC	130	Business Law and Ethics	3
Set 1 - Electives			
IET	266	Quality Systems, Audits, and Certification	3
IET	269	Dimensional Metrology and Inspection II	3
Set 2 - Electives			
IET	123	Machine Tools	3
IET	247	Advanced Manufacturing Processes	3
			17

69 TOTAL CREDIT HOURS

† Based on SSCT placement score.

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Interactive Media Technology

The interactive media technology program is an adventure into the creative side of computing that allows for a total of four curriculum paths in computer science and engineering technology.

An associate degree in interactive media technology will prepare students to develop feature rich, interactive presentations using some of today's hottest technologies including "bit-streaming" media, BRML, SMIL, and MIDI. There is currently a tremendous demand for individuals who know how to use multi-media to develop interactive presentations. Stark State is an authorized academic training program (AATP) for Microsoft®. This means students can take courses that will prepare them for Microsoft certification tests which can be taken at Stark State College.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
ECA	228	Internet/Intranet Software Design I	2
ENG	124	College Composition†	3
PHY	121	Physics I	4
MTH	121	Intermediate Algebra and Trigonometry I	4
ECA	127	Software Engineering Principles	3
			18
Semester II			
ECA	222	Introduction to C++ Programming	3
IMT	121	Interactive Media	3
IMT	122	Graphic Art Design	3
ECA	229	Internet/Intranet Software Design II	3
EET	129	Optics	2
DET	125	Basic AutoCAD	3
			17
Semester III			
ECA	225	Applied Online Programming	3
SPH	122	Inter-group Communications	3
IMT	222	Digital A/V Production/Editing I	4
ACC	130	Business Law and Ethics	3
ENG	221	Technical Report Writing	3
BUS	122	Basic Economics	3
			19
Semester IV			
EST	130	Electrical Circuits and Devices	4
IMT	223	Digital A/V Production/Editing II	4
IMT	224	C++ for Gaming Development	3
IMT	225	Production Development and Distribution	3
IMT	226	Internship	4
			18

72 TOTAL CREDIT HOURS

(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

TECH PREP
A TECH PREP PARTICIPANT

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Interactive Media Technology

Graphic Arts Option

Stark State offers a graphic arts design option which prepares students to develop three-dimensional graphics for the Internet, print media and animation-based projects. The focus of this option is the mastery of the Discreet 3D Studio Max ™ interface to generate and manipulate still and animated graphics.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
ECA	228	Internet/Intranet Software Design I	2
ENG	124	College Composition†	3
IMT	121	Graphic Arts Design	3
MTH	121	Intermediate Algebra and Trigonometry I	4
ECA	127	Software Engineering Principles	3
			17
Semester II			
ECA	222	Introduction to C++ Programming	3
PHY	121	Physics I	4
IMT	121	Interactive Media	3
IMT	125	Graphic Arts - Programming in 3D Studio MAX I	3
DET	125	Basic AutoCAD	3
			16
Semester III			
ECA	225	Applied Online Programming	3
SPH	122	Inter-group Communications	3
IMT	222	Digital A/V Production/Editing I	4
ACC	130	Business Law and Ethics	3
BUS	122	Basic Economics	3
IMT	227	Graphic Arts - Programming in 3D Studio MAX II	3
			19
Semester IV			
IMT	223	Digital A/V Production/Editing II	4
IMT	224	C++ for Gaming Development	3
IMT	225	Product Development and Distribution	3
IMT	228	Graphic Arts - 3 D Design Practicum	3
EET	129	Optics	2
ENG	221	Technical Report Writing	3
			18

70 TOTAL CREDIT HOURS

(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

TECH PREP
A TECH PREP PARTICIPANT

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Interactive Media Technology

Macromedia® Option

Stark State College offers an excellent Web (online) programming course of study. This option is an enhancement to the online programming option offered in computer science and engineering technology. Through this option offered by the interactive media technology program students will learn the exciting world of the Macromedia products interface. Programs such as Flash, Authorware, Director and Dreamweaver will enhance the Web design experience and allow for more versatility through interactive programming within these interfaces.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
ECA	228	Internet/Intranet Software Design I	2
ENG	124	College Composition†	3
IMT	122	Graphic Arts Design	3
MTH	121	Intermediate Algebra and Trigonometry I	4
ECA	127	Software Engineering Principles	3
			17
Semester II			
ECA	222	Introduction to C++ Programming	3
IMT	121	Interactive Media	3
PHY	121	Physics I	4
ECA	229	Internet/Intranet Software Design II	3
IMT	123	CBT Development with Director 8	3
DET	125	Basic AutoCAD	3
			19
Semester III			
ECA	225	Applied Online Programming	3
SPH	122	Inter-group Communications	3
IMT	222	Digital A/V Production/Editing I	4
ACC	130	Business Law and Ethics	3
BUS	122	Basic Economics	3
IMT	126	Animation/Shockwave Development with Macromedia Flash	3
			19
Semester IV			
EET	129	Optics	2
ENG	221	Technical Report Writing	3
IMT	223	Digital A/V Production/Editing II	4
IMT	224	C++ for Gaming Development	3
IMT	225	Product Development and Distribution	3
IMT	124	Designing for the Internet with Dreamweaver	2
			17

72 TOTAL CREDIT HOURS

(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Interactive Media Technology

MIDI Option

No engineered interface would be complete without sound. The MIDI (musical instrument digital interface) option fits that need for a complete, well-rounded designer in today's IT based world. Starting from scratch, students will learn the theoretical basis of composition and harmony mixed with the electronics that allow them to excel in the world of audio arranging, composing and engineering.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECA	122	Engineering Computer Applications (8W 2)	2
ECA	228	Internet/Intranet Software Design I	2
ENG	124	College Composition†	3
IMT	121	Interactive Media	3
IMT	222	Digital A/V Production/Editing I	4
ECA	127	Software Engineering Principles	3
			17
Semester II			
ECA	222	Introduction to C++ Programming	3
IMT	122	Graphic Arts Design	3
IMT	229	Theory and Composition I	2
EET	129	Optics	2
MTH	121	Intermediate Algebra and Trigonometry I	4
PHY	121	Physics I	4
IMT	232	Instrumental Practicum	1
			19
Semester III			
ECA	225	Applied Interactive Software Engineering Development	3
EET	257	Unix Operating Environment	3
SPH	122	Inter-group Communications	3
IMT	230	Theory and Composition II	2
ACC	130	Business Law and Ethics	3
ENG	221	Technical Report Writing	3
BUS	122	Basic Economics	3
			20
Semester IV			
EST	130	Electrical Circuits and Devices	4
IMT	223	Digital A/V Production/Editing II	4
IMT	231	Programming MIDI Samples Using Software Languages	3
IMT	225	Product Development and Distribution	3
IMT	226	Internship	4
			18

74 TOTAL CREDIT HOURS

(8W 2) = 8-week course 2nd 8 weeks
† Based on SSCT placement score.

A 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 mechanical engineering technician may be involved in the selection and coordination of equipment and processes for manufacturing. Therefore, they must have an understanding of processes, materials and supervision.

The mechanical engineering technology program provides students with theory and practical application through many hours of actual lab test work.

The 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 mechanical engineering technology.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ENG	124	College Composition†	3
MTH	121	Intermediate Algebra and Trigonometry I	4
DET	121	Engineering Drawing	3
MET	121	Intro. to Design and Mechanical Engineering	2
PHY	121	Physics I	4
MET	123	Material Science	2
			18
Semester II			
SPH	122	Inter-group Communications	3
MTH	122	Intermediate Algebra and Trigonometry II	3
PHY	122	Physics II	4
MET	124	Statics and Strength of Materials	4
MET	225	Manufacturing Processes	3
			17
Semester III			
ACC	130	Business Law and Ethics	3
MTH	221	Analytic Geometry and Calculus	3
MET	122	Machine Design	4
MET	221	Advanced Strength of Materials	2
MET	222	Fluid Power	4
DET	125	Basic AutoCAD or ProEngineer (DET131)	3
			19
Semester IV			
EST	221	Technical Report Writing	3
BUS	122	Basic Economics	3
MET	223	Dynamics	2
EST	130	Electrical Circuits and Devices	4
MET	227	Thermodynamics and Heat Transfer	3
MET	226	Technical Project	2
			17

70 TOTAL CREDIT HOURS

† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Engineering Technology Division

Career Enhancement Programs*

Stark State College recognizes that not all students will seek an associate's degree. Students might need to develop specific sets of skills to qualify for or improve performance in a given career setting. In response to this need, Stark State has developed "career enhancement" programs which document a student's proficiency in a variety of knowledge areas. The following series of courses are offered to non-degree seeking individuals desiring an opportunity to gain or improve marketable skills.

These courses are offered on a continuing basis at our campus location. We welcome inquiries from companies that may wish to investigate the possibility of offering them on-site at company locations.

Students enrolling in an associate degree program may apply these courses toward the degree if it is in the same area of study. Application for the "career enhancement" program should be made to the appropriate department head or academic dean.

Automotive Service Certificate

Basic Level	Automotive Technical Skills (AUT121) Automotive Systems and Engine Technology (AUT122) Engine Diagnosis and Major Service (AUT123)
Intermediate Level	Vehicle Chassis System (AUT124) Automotive Electrical and Accessory Systems (AUT125) Automotive HVAC Systems (AUT126)
Advanced Level	Fuel and Emission Systems (AUT221) Engine Systems Performance Diagnosis (AUT222) Advanced Automotive Electronics (AUT223) Computerized Vehicle Controls (AUT233)

Civil Engineering Technology

Architectural Drafting Certificate	Architectural Drafting I (CET122) Architectural Drafting II (CET123) Basic AutoCAD (DET125) A/E CAD (CET 234) Building Materials and Construction Methods (CET121)
Civil/Surveying Drafting Certificate	Architectural Drafting I (CET122) Highway and Map Drawing (CET124) Basic AutoCAD (DET125) Surveying Graphics (CET221) Building Materials and Construction Methods (CET121)
Construction Materials Inspection Certificate	Building Materials and Construction Methods (CET121) Concrete and Asphalt Testing (CET222) Soil Mechanics (CET125)

Computer Science and Engineering Technology

Webmaster Certificate	Engineering Computer Applications (ECA122) Internet/Intranet Software Design Applications I (ECA228) Java Programming in Computer Science (ECA223)
Advanced Webmaster Certificate	Internet/Intranet Software Design Applications II (ECA229) Applied Interactive Software Engineering Development (ECA225) Design and Development for E-Commerce Sites (ECA232)

C++ Certificate	Introduction to C++ Programming (ECA22) Visual C++ The Microsoft Foundation Classes (ECA226) Software Engineering Design and Development with COM (ECA224)
Java Programming Certificate	Java Programming in Computer Science (ECA223) Database Design/Interface for Software Developers (ECA230) Advanced Java Programming for Software Engineering (ECA239)
Visual Basic Certificate	Software Engineering Principles (ECA127) Intermediate Desktop Applications with Visual Basic (ECA128) Distributed Applications with Visual Basic (ECA238)

Design Engineering Technology

AutoCAD Certificate	Basic AutoCAD (DET125) Intermediate AutoCAD (DET126) Advanced AutoCAD (DET230)
Computer-Aided Design Certificate	Jig and Fixture Design (DET221) Die Design (DET225) Geometric Dimensioning and Tolerancing (DET226)

Industrial Engineering Technology

Quality Assurance Certificate	Statistical Quality Control (IET222) Dimensional Metrology and Inspection I (IET270) Dimensional Metrology and Inspection II (IET269) Quality Systems, Audits and Certifications (IET268)
Production Specialist Certificate	Work Measurement (IET221) Statistical Quality Control (IET222) Production Planning and Inventory Control (IET224) Process Improvement, Methods and Measurements (IET268)

Interactive Media Technology

Interactive Media Certificate	Digital A/V Production/Editing I (IMT222) Digital A/V Production/Editing II (IMT223) Interactive Media (IMT121) Graphic Arts Design (IMT122) Internet/Intranet Software Design I (ECA228) Applied Online Programming (ECA225)

Mechanical Engineering Technology

Machine Design Certificate	Advanced Strength of Materials (MET221) Machine Design (MET122) Technical Project (MET226)
Mechanical Power Certificate	Machine Design (MET122) Fluid Power (MET222) Electrical Circuits and Devices (EST130)

* 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. Applicant must secure department head or academic dean approval before completing registration process. Non-degree seeking students may not be eligible for financial aid.

GENERAL STUDIES AND PUBLIC SERVICE TECHNOLOGIES

Early Childhood Education Technology
Fire Science Technology
EMT Certification
Human and Social Service Technology
Gerontology Option

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 human and social services technology, fire science technology and early childhood education. These majors are attracting students in record numbers as our country renews its interest in public service careers. Firefighters, teachers aides, social worker paraprofessionals, emergency medical technicians and daycare workers are just a few in a long list of public service career opportunities.

Stark State's goal is to attract young people to careers in public service and to provide the quality training, skills and values necessary for our students to succeed and excel in those fields.

TECH PREP
A TECH PREP PARTICIPANT

Early Childhood Education Technology

The early childhood education program prepares students for professional careers as teachers, assistants, and administrators in a variety of childcare/education settings. Graduates may seek employment in public and private preschool, childcare, 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 69 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.

Effective fall semester 2001, students must complete an early childhood education (ECE) application packet and submit it the semester prior to beginning the ECE program. Packets will be available in the ECE department and the general studies/public service division.

Upon successful completion of the early childhood education program and with the recommendation of early childhood education department head, graduates may apply for their pre-kindergarten associate certificate from the Ohio Department of Education.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
ECE	121	Introduction to Early Childhood Education*	3
SOC	123	Dynamics of the Family	3
PSY	121	General Psychology	3
ENG	124	College Composition†	3
CAP	120	Business Computer Applications	4
			16
Semester II			
ECE	122	Curriculum Design and Instruction	3
ECE	123	Health Nutrition	3
SOC	225	Cultural Diversity	3
MTH	222	Statistics	3
PSY	125	Child Development I	3
SPH	121	Effective Speaking	3
			18
Semester III			
ECE	124	Infant-Toddler Curriculum	2
ECE	221	Language Arts	3
ECE	222	Creative Materials and Guided Play	3
ECE	223	Community and Family-based Programs	3
ECE	226	Wrap-around Programs	2
PSY	223	Child Development II	3
PHL	122	Ethics	3
			19
Semester IV			
ECE	224	Early Childhood Program Administration	3
ECE	225	The Exceptional Child	3
ECE	227	ECE Practicum and Seminar	3
ECE	228	Phonics for Young Children	3
BIO	126	Science, Energy and the Environment	4
			16

69 TOTAL CREDIT HOURS

* Developmental writing course requirements must be completed prior to enrollment.
† Based on SSCT placement score

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Fire Science Technology

Fire protection is a complex and rapidly changing technical field. The fire science program will provide the knowledge and background necessary to meet the challenge of protecting the public in the 21st century.

Today's firefighter is a skilled professional who works with sophisticated techniques and equipment. A firefighter completing the program will benefit from a significant increase in knowledge of the profession as well as an enhanced ability to compete for promotional opportunities.

Students who are not currently members of the fire service will gain knowledge that may improve their opportunity for becoming a firefighter. They may also choose to pursue opportunities in the areas of industrial fire protection, insurance inspection and investigation, and fire equipment sales.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
FST	121	*Introduction to Fire Science**	2
ENG	124	College Composition†	3
PSY	121	General Psychology	3
FST	124	Fire Prevention and Safety Codes	3
FST	227	Personnel Training and Public Relations	2
FST	126	Environmental Science	3
			16
Semester II			
ENG	122	Communication Theory	3
FST	122	Fire Hydraulics	3
FST	222	Management in Fire Service	3
ENG	221	Technical Report Writing	3
MTH	101	Introduction to Algebra	4
FST	127	Emergency Medical Technician – Basic***	5
			21
Semester III			
PHY	101	Principles of Physics	4
BUS	122	Basic Economics	3
FST	125	Building Construction for the Fire Service	2
FST	123	Fire Detection and Suppression Systems	3
FST	224	Legal Aspects of Fire Investigation	2
FST	226	Line Officer Leadership	3
			17
Semester IV			
CAP	120	Business Computer Applications	4
FST	225	Hazardous Materials	3
FST	223	Fire Investigation Methods	3
FST	221	Command Tactics and Strategies	3
SPH	121	Effective Speaking	3
			16

70 TOTAL CREDIT HOURS

* May use 240-hour course.
** Prerequisite for technical courses
*** See advisor for scheduling
† Based on SSCT placement score

TECH PREP
A TECH PREP PARTICIPANT

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Human and Social Service Technology

The human and social service technology (HSST) 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 toward 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.

Gerontology Option/Certificate of Competence
The gerontology option/certificate of comptence provides students with knowledge and understanding of the normal but highly variable processes of aging and human development. Both prepare students to be more effective in working with older adults and in the implementation of programs and services for the elderly. The gerontology option/certificate of competence are both designed for the professional or paraprofessional individual currently working in the field of aging, students who anticipate working with older adults, or anyone who is interested in understanding the aging process for personal or professional reasons. The gerontology certificate of competence can be completed independently of or as part of the human and social service technology degree program.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
SWK	121	Introduction to Social Welfare	3
ENG	124	College Composition†	3
SOC	121	Sociology	3
SPH	121	Effective Speaking	3
CAP	120	Business Computer Applications	4
			16
Semester II			
SWK	128	Introduction to Gerontology	3
SWK	224	Poverty in the U.S.	3
PSY	121	General Psychology	3
SWK	127	Group Processes	4
BIO	127	Human Biology	4
			17
Semester III			
SWK	124	Methods in Practice I	3
SWK	126	Human Behavior and the Social Environment	3
MTH	222	Statistics	3
SWK	125	Substance Abuse	3
PSC	121	Political Science	3
		Elective*	3
			18
Semester IV			
BUS	122	Basic Economics	3
SWK	227	HSST Practicum	2
SWK	228	HSST Practicum Seminar	1
SWK	130	Methods in Practice II	3
SWK	226	Social Service Law	3
SOC	225	Cultural Diversity	3
		Elective*	3
			18

69 SEMESTER CREDITS

* Must select from list of SWK**, SOC and PSY courses.
** Students who successfully complete SWK 129 and SWK 230 as their technical electives, or in addition to their technical electives, will receive the gerontology option and/or certificate of competence.
NOTE: Grade of "C" or better required for all courses relating to the gerontology option/certificate of competence.
† Based on SSCT placement score

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Human Service Development Institute

One-Year Certificate in Job and Family Services

The Human Services Development Institute (HSDI) houses the TOPS program (Training Opportunities for Program Staff) and the one-year certificate program in job and family services.

TOPS provides employment-related coursework designed for human service professionals in state and local agencies. This initiative is designed to enhance and expand the knowledge and skills of employees to effectively administer a variety of social services and employment programs which promote self-support and self-sufficiency.

Current and potential employees will be better prepared as they enter the field of human and social services. The practicum experience permits students to utilize coursework in the current workplace prior to entering the workforce.

All coursework for the one-year certificate transfers to the associate degree program. The associate degree may then be applied to the "2 + 2" transfer module to baccalaureate degrees in social work at participating colleges and universities.

The job and family services certificate may be completed by a full-time student in one year. All students in the program will be expected to complete the program within four years of their initial application.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
HST	226	Overview of Job and Family Services	2
HST	223	Information and Time Management Skills	2
HST	264	Case Management for Self-Sufficiency	1
HST	261	Welfare to Work	2
SWK	126	Human Behavior and Social Environment	3
ENG	124	College Composition†	3
CAP	120	Business Computer Applications*	4
			17
Semester II			
HST	250	Strategies for Change	2
HST	258	Family Assessment	1
HST	257	Interviewing Skills for Social Service Workers	2
HST	246	Collaboration for Social Service Workers	2
HST	247	Practicum - Collaboration	1
SWK	227	Social Service Practicum**	2
SWK	228	Practicum Seminar**	1
MTH	222	Statistics	3
PSY	124/121	Psychology of Work or General Psychology	3
			17

34 TOTAL CREDIT HOURS

* Four one-credit hour computer courses may substitute for CAP120
** Three one-credit hour HST practicum courses may be substituted for SWK227/228
† Based on SSCT placement score

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HEALTH TECHNOLOGIES

Dental Hygiene

Health Information Technology

Medical Transcription Certificate

Massage Therapy

Massage Therapy Certificate

Medical Assisting

Medical Laboratory Technology

Nursing (ADN)

LPN to RN

Occupational Therapy Assistant Technology

Physical Therapist Assistant Technology

Respiratory Care Technology

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 next page.

TECH PREP
A 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 **Registration 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 **Registration Office**.
2. Take the SSCT pre-admission placement tests.
3. Submit official college transcripts from any other institutions to the **Registration 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 **Registration 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 and the physical therapist assistant technology program are accepted on a selective basis. Any applicant who is not accepted on a given year must reapply the next year to be considered. Applications to these programs are available on July 1 at the **Office of Admissions/Student Services**. The applicant should submit the application to the **Registration 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 **Registration Office** until all requirements are met. Please see the 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 related to alcohol/drugs 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.

While each state has its own specific regulations governing the dental hygienist's responsibilities, typical services provided in Ohio include: scaling and polishing teeth, taking and developing dental radiographs (x-rays), patient screening procedures, applying preventive materials such as sealants and fluorides, making impressions of patients' teeth for study models, counseling patients regarding nutrition, teaching appropriate oral hygiene techniques, and performing documentation and office management activities.

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. Currently, prospective students must meet the following eligibility requirements:

- Be a high school graduate or have a GED certificate.
- Complete SSCT's Compass Assessment Test and take the 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 50th percentile or above on the PAX test.
- Complete the dental office 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. Other states may have different licensing requirements. Licensure is mandatory for employment as a dental hygienist.

Dental hygiene applicants/students should inform the program director of any misdemeanor related to alcohol or drugs, 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 (section 473.28 of the *Ohio Revised Code*).

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

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Dental Hygiene Program

SUGGESTED COURSE SEQUENCE

Summer I		Eligibility Courses	Credit Hours
CHM	121	General Chemistry	4
BIO	121	Anatomy and Physiology I	4
ENG	124	College Composition†	3
PSY	121	General Psychology	3
			14
Semester I			
DHY	121	Head, Neck and Oral Anatomy	2
DHY	122	Oral Histology and Embryology	1
DHY	123	Dental Radiography	3
DHY	131	Fundamentals of Dental Hygiene Practice	4
BIO	122	Anatomy and Physiology II	4
			14
Semester II			
DHY	124	Periodontology I	1
DHY	125	Dental Materials	3
DHY	126	Pathology	2
DHY	132	Dental Hygiene Theory I	2
DHY	133	Clinical Dental Hygiene I	2
BIO	221	Microbiology**	4
			14
Summer II			
DHY	134	Clinical Dental Hygiene IA	1
			1
Semester III			
DHY	221	Nutrition in Dentistry	1
DHY	222	Dental Pharmacology	2
DHY	223	Community Oral Health	2
DHY	231	Dental Hygiene Theory II	2
DHY	232	Clinical Dental Hygiene II	4
SOC	121	Sociology	3
			14
Semester IV			
DHY	224	Periodontology II	1
DHY	233	Dental Hygiene Theory III	2
DHY	234	Clinical Dental Hygiene III	5
SPH	121	Effective Speaking	3
PSY/PHL		Psychology/Philosophy Elective*	3
			14

71 SEMESTER CREDITS

* May select from PSY122, PSY123, PSY124, or PHL122 or may select other PSY/PHL/SOC/SWK course with permission of the dental hygiene program director.

** May not be taken earlier than three years prior to enrollment in DHY121

† Based on SSCT placement score.

TECH PREP

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Health Information Technology

Health information technology is one of the fastest growing occupations in the country today. According to the *2000-2001 Occupational Outlook Handbook*, a career as a health information specialist or technician is one of the top 20 jobs of the future.

Technological advances and increasing demands for health information have brought about the rapid increases in employment opportunities. Data from the medical record is used to promote continuity of patient care, aid in research and determine reimbursement from insurance companies and governmental agencies. The record also serves as the permanent legal documentation of a patient's course of treatment and care.

Health information technicians are the experts who secure, analyze, integrate and manage information. By providing quality information, the health information technician contributes to quality patient care.

Graduates of health information technology associate degree programs are known as health information technicians or registered health information technicians. Common job titles held by health information technicians in today's job market include: coder, medical record technician, registered health information technician, supervisor, reimbursement specialist and others. It is anticipated that job titles will change as health care enterprises expand their reliance on information systems and technology.

Registered health information technicians generally perform technical duties vital to the professional operation of a health care facility's medical record department. These may include analysis of the medical record; collection and preparation of statistical data, coding and abstracting of diseases and operations, and quality improvement activities. One of the most important job functions is to maintain the confidentiality of patient information and ensure the integrity of the record.

Registered health information technicians primarily are employed in hospitals, long-term care and outpatient facilities. In a small facility, the accredited health information technician may have full responsibility for the operation of the medical record department; while in a large institution, they may specialize in a particular function such as coding. There has been an increase in jobs in places such as insurance and 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 accounting firms, software vendors, research facilities and information system departments.

The health information 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 20.

Graduates of the health information 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).

To be eligible for admission to the program, students must have completed all of the following requirements:

- Be a high school graduate or have a GED certificate.
- Submit a Stark State College admission application and complete all admission requirements of Stark State College including submission of high school and/or college transcripts.
- Submit a health technologies application.
- Complete Introduction to Anatomy and Physiology or high school biology (within the last five years) with a grade of "C" or better; proficiency score on admissions math test of "B" or better in Math Fundamentals; tour of a medical records department and completion of the tour form.
- Have a cumulative grade point average of 2.0 or better on a 4.0 scale for high school work (within the last five years) or 12 or more college credits.

Fulfilling the above criteria does not guarantee admission to the health information technology program.

The health information technology program is accredited by the Commission on the Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the American Health Information Management Association's Council on Accreditation.

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.

Health Information Technology

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
HIT	121	Introduction to Health Information Technology	4
BIO	125	Medical Terminology	3
HIT	123	Medicolegal Aspects	2
BIO	123	Principles of Human Structure and Function	5
CAP	120	Business Computer Applications	4
			18
Semester II			
BIO	124	Pathophysiology	3
HIT	122	Ancillary Health Records and Registries	3
BIO	222	Pharmacology	3
HIT	124	Introduction to Coding	4
ENG	124	College Composition†	3
			16
Semester III			
HIT	221	Advanced Coding	3
HIT	222	Statistics/Data Retrieval	3
HIT	224	Health Care Quality Improvement	2
HIT	226	HIT Professional Practice I/Seminar I	4
ENG	122	Communication Theory	3
		Social Science Elective*	3
			18
Semester IV			
ENG	222	Medical Technology Report Writing**	3
HIT	223	HIT Management**	3
HIT	228	Coding for Reimbursement	4
HIT	229	Information Systems in Health Care	3
HIT	227	HIT Professional Practice II/Seminar II	4
			17

69 SEMESTER CREDITS

* May select from Psychology or Sociology offerings.
** ENG 222 must be taken concurrently with HIT 223.
† Based on SSCT placement score.

Stark State College also offers a one-year certificate program in medical transcription which could later lead to an associate of applied science degree in health information technology. See the medical transcription program page for more details.

A 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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Massage Therapy Program

Massage therapy is a study of the interrelationship of body, mind and spirit. Massage therapists work with the soft tissues of the body. They are very effective at relieving pain syndromes involving the soft tissues.

Massage therapists work in a wide range of settings. Some work directly with physicians, chiropractors, physical therapists, counselors or other professionals. Others have their own businesses and work out of their own home, the homes of others, or their own office.

The State of Ohio Medical Board licenses massage therapists in Ohio. Ohio's licensed massage therapists are the only massage therapists in the United States who can, by license, refer to themselves as limited medical practitioners. They earn this honor by completing a rigorous curriculum designed to provide them with the basic tools needed to enter into the profession of massage therapy. The massage therapy programs presented at Stark State are approved by the State Medical Board of Ohio.

Massage therapists need to be capable of standing for an hour or more at a time, developing upper body strength to meet the physical demands of the profession, and be knowledgeable regarding the location and condition of human bones and muscles.

Following the chosen course of study most students elect to take the State Medical Board licensing examination and after licensure may establish a massage therapy practice in Ohio.

Stark State College offers two approaches to training as a massage therapist. The massage therapy certificate program enables students to complete the coursework necessary to sit for the licensing examination after completing 42 credit hours in four semesters.

The other option is the associate of technical studies degree with a massage therapy major. The degree program includes additional coursework for the business and management aspects of a massage therapy practice. The associate degree program would require students to complete 70 credit hours in five semesters.

Massage Therapy Certificate Program

SUGGESTED COURSE SEQUENCE

Program Beginning in Fall

			Credit Hours
Fall – Semester I			
MAS	121	Massage Therapy I	6
BIO	125	Medical Terminology	3
BIO	121	Anatomy and Physiology I	4
			13
Spring – Semester II			
MAS	122	Massage Therapy II	2
MAS	224	Massage Therapy III	4
BIO	122	Anatomy and Physiology II	4
ENG	124	College Composition†	3
			13
Summer – Semester III			
MAS	225	Massage Therapy IV	2
CAP	120	Business Computer Applications	4
			6
Fall – Semester IV			
MAS	226	Massage Therapy V	4
MAS	223	Massage Therapy Review	2
		Elective*	4
			10

Program Beginning in Spring

			Credit Hours
Spring – Semester I			
MAS	121	Massage Therapy I	6
BIO	125	Medical Terminology	3
BIO	121	Anatomy and Physiology I	4
			13
Summer – Semester II			
MAS	122	Massage Therapy II	2
CAP	120	Business Computer Applications	4
			6
Fall – Semester III			
MAS	224	Massage Therapy III	4
MAS	225	Massage Therapy IV	2
BIO	122	Anatomy and Physiology II	4
ENG	124	College Composition†	3
			13
Spring – Semester IV			
MAS	226	Massage Therapy V	4
MAS	223	Massage Therapy Review	2
		Elective*	4
			10

42 TOTAL CREDIT HOURS

* May select from BUS121 or BUS123.
† Based on SSCT placement score.

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Massage Therapy Program

Associate of Technical Studies Massage Therapy Major

SUGGESTED COURSE SEQUENCE

Program Beginning in Fall

Fall – Semester I			Credit Hours
MAS	121	Massage Therapy I	6
BIO	125	Medical Terminology	3
BIO	121	Anatomy and Physiology I	4
BUS	121	Business Administration	4
			17
Spring – Semester II			
MAS	122	Massage Therapy II	2
MAS	224	Massage Therapy III	4
BIO	122	Anatomy and Physiology II	4
ENG	124	College Composition†	3
MGT	121	Principles of Management	3
ENG	123	Business Communication	3
			19
Summer – Semester III			
MAS	225	Massage Therapy IV	2
BUS	123	Business Math	4
			6
Fall – Semester IV			
MAS	226	Massage Therapy V	4
MAS	223	Massage Therapy Review	2
ACC	121	Principles of Accounting I	4
MGT	221	First Line Supervision	3
MKT	121	Principles of Marketing	3
			16
Spring – Semester V			
MGT	225	Contemporary Management Issues	2
PSY	121	General Psychology	3
SOC	121	Sociology	3
CAP	120	Business Computer Applications	4
			12

Program Beginning in Spring

Spring – Semester I			Credit Hours
MAS	121	Massage Therapy I	6
BIO	125	Medical Terminology	3
BIO	121	Anatomy and Physiology I	4
BUS	121	Business Administration	4
ENG	124	College Composition†	3
			20
Summer – Semester II			
MAS	122	Massage Therapy II	2
BUS	123	Business Math	4
			6
Fall – Semester III			
MAS	224	Massage Therapy III	4
MAS	225	Massage Therapy IV	2
BIO	122	Anatomy and Physiology II	4
ACC	121	Principles of Accounting I	4
MGT	121	Principles of Management	3
ENG	123	Business Communication	3
			20
Spring – Semester IV			
MAS	226	Massage Therapy V	4
MAS	223	Massage Therapy Review	2
CAP	120	Business Computer Applications	4
MGT	225	Contemporary Management Issues	2
MKT	121	Principles of Marketing	3
MGT	221	First Line Supervision	3
			18
Summer – Semester V			
PSY	121	General Psychology	3
SOC	121	Sociology	3
			6

70 TOTAL CREDIT HOURS

* May select from BUS121 or BUS123.
† Based on SSCT placement scores.

TECH PREP
A 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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Medical Assisting Program

Employment of medical assistants is expected to grow much faster than the average for all occupations through the year 2005 as the health service industry expands, according to the *2000-2001 Occupational Outlook Handbook* published by the U.S. Department of Labor.

The medical assisting program offers a traditional four-semester "day track" program. A "night track" program is offered as an alternative program for students who work during the day. Night track applicants should complete the specified general studies courses prior to program admission and are strongly encouraged to contact the program director for scheduling advice. (See page 115 for night course sequence.)

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 technician 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 (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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Medical Assisting Program

Day Track

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BIO	123	Principles of Human Structure and Function	5
CAP	120	Business Computer Applications	4
BIO	125	Medical Terminology	3
OAD	121	Keyboarding/Formatting/Test*	3
MTH	101	Introduction to Algebra/Test*	4
MAT	121	Medical Assisting I	4
			23
Semester II			
PSY	121	General Psychology	3
MAT	124	Medical Transcription for Medical Assistants	3
BIO	124	Pathophysiology	3
MAT	122	Medical Assisting II	4
ENG	124	College Composition†	3
			16
Semester III			
PSY	123	Human Growth and Development	3
MAT	221	Medical Laboratory Procedures for Medical Assistants	3
MAT	222	Insurance for Medical Assistants	4
MAT	223	Office Procedures	4
MAT	124	Pharmacology/Medication	4
			18
Semester IV			
MAT	225	Emergency Medical Procedures for Medical Assisting	2
MAT	123	Medical Assisting III/Seminar	3
MAT	226	Office Management and Law	3
MAT	227	Externship Medical Assisting	2
		Social Sciences Elective or Technical Elective	3
			13

70 TOTAL CREDIT HOURS

* It is strongly suggested that students attempt to test out of both Introduction to Algebra and Keyboarding/Formatting (see administrative information technology proficiency exam schedule).

Ophthalmology I, II may be taken semester three and four and Advanced Phlebotomy may be taken semester four to fulfill the social sciences/technical elective requirement.

† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Medical Assisting Program

Night Track – (4 Semesters)

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BIO	123	Principles of Human Structure and Function	5
CAP	120	Business Computer Applications	4
BIO	125	Medical Terminology	3
OAD	121	Keyboarding/Formatting/Test*	3
MTH	101	Introduction to Algebra/Test*	4
MAT	121	Medical Assisting I	4
			15-23
Semester II			
MAT	121	Medical Transcription for Medical Assistants	3
BIO	124	Pathophysiology	3
MAT	122	Medical Assisting II	4
ENG	124	College Composition†	3
		Social Science Elective or Technical Elective***	3
			16
Semester III			
PSY	123	Human Growth and Development**	3
MAT	221	Medical Laboratory Procedures for Medical Assistants	3
MAT	222	Insurance for Medical Assistants	4
MAT	223	Office Procedures	4
PSY	121	General Psychology**	3
			17
Semester IV			
MAT	225	Emergency Medical Procedures for Medical Assisting	2
MAT	123	Medical Assisting III/Seminar	3
MAT	226	Office Management and Law	3
MAT	224	Pharmacology/Medications	4
MAT	227	Externship Medical Assisting	2
			14

70 TOTAL CREDIT HOURS

* To complete the technical component within four semesters, it is strongly suggested that an attempt be made to test out of Introduction to Algebra and Keyboarding/Formatting. (See administrative information technology proficiency exam schedule).

** General Psychology, Human Growth and Development and College Composition should also be taken *before* admission to the medical assisting night track, or during the summer between semesters two and three. This will reduce the semester course load and enable the student to complete the medical assisting program in two years.

*** Three-credit hour elective may be taken prior to admission, during the summer between semesters two and three. Ophthalmology I and II may be taken on Saturday, semester three and four to fulfill the social sciences/technical elective requirement. Advanced Phlebotomy may be taken on Saturday, semester four.

† Based on SSCT placement score.

TECH PREP
A TECH PREP PARTICIPANT

FRANKLIN UNIVERSITY

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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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.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
MTL	121	Fundamentals of Lab Technology	3
MTL	122	Urinalysis	2
CHM	121	General Chemistry	4
BIO	123	Principles of Human Structure and Function	5
MLT	123	Hematology I	3
			17
Semester II			
MTH	123	Intermediate Algebra	3
MLT	124	Hematology II	4
MLT	125	Immunohematology	5
CHM	122	Organic and Biological Chemistry	4
ENG	124	College Composition†	3
			19
Summer			
CAP	120	Business Computer Applications	4
BIO	221	Principles of Microbiology	4
			8
Semester III			
MTL	221	Clinical Immunotology/Serology	3
MTL	222	Clinical Chemistry	5
MTL	223	Clinical Microbiology	7
		Social Sciences Elective*	3
			18
Semester IV			
MTL	224	Directed Practice/Seminar	10
			10

72 TOTAL CREDIT HOURS

* May select from Sociology or Psychology offerings.
† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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Medical Transcription

One-Year Certificate Program

Medical transcription is the art and science of producing a technically and grammatically correct, typed report of the dictated word. This report is directly utilized in patient care. It is also a legal document and becomes a permanent part of the patient's medical record.

The medical transcriptionist is an integral part of the health care team and provides the accurate, timely document used in patient treatment and care.

Medical transcriptionists work in a variety of settings, including: the medical records department of acute care hospitals, medical transcription services, same-day surgery centers, group practices and physician offices.

The medical transcription program is a complete certificate program leading to full-time employment. Graduates of the medical transcription program may later choose to apply to the health information technology program and earn an associate of applied science degree.

The advantage of this program is that students can be employed while earning the associate degree. Please refer to the health information technology program description on page 110 for additional information.

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BIO	125	Medical Terminology	3
BIO	123	Principles of Human Structure and Function	5
OAD	121	Keyboarding/Formatting	3
MTC	121	Transcription/Terminology I	5
			16
Semester II			
MTC	122	Transcription /Terminology II	5
OAD	129	Keyboarding/Skillbuilding (8 weeks)	1
ENG	124	College Composition†	3
BIO	124	Pathophysiology	3
			12
Summer			
BIO	222	Pharmacology	3
MTC	123	Advanced Medical Transcription	3
			6

34 TOTAL CREDIT HOURS

† Based on SSCT placement score.

A TECH PREP PARTICIPANT

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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, or have a college GPA of 3.0 or better in 12 or more hours of coursework, or have a GED certificate.
- Have completed one year of high school algebra, chemistry and biology with a grade of "C" or better within the past five years, or show equivalency.
- Complete Stark State's pre-admission test and take any courses recommended as a result of that test.
- Score 50% or higher on the National League for Nursing pre-admission examination for registered nurses.

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 on page 119.

According to Section 4723.28 of the *Ohio Revised Code*, nursing students are responsible for informing the department head/director of nursing, early in the program, of any misdemeanor related to alcohol or drugs, 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.

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.

The Stark State College ADN program has the following written articulation agreements in place:

- Malone College, Department of Nursing, Bachelor of Science in Nursing (BSN) degree-completion track for RNs (Canton, Ohio)
- Wayne College Joint Vocational High School nurse program and the Wayne Adult School of Practical Nursing (Smithville, Ohio)
- Practical Nurse Program of Canton City Schools (Canton, Ohio)
- Walsh University, B.S.N. Degree for the Registered Nurse (BSN-RN) Program (Canton, Ohio)

Transfer guidelines are available from the Admissions Department ADN program director.

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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Associate Degree in Nursing (ADN) Program

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
NUR	121	Fundamental Concepts of Nursing	6
BIO	121	Anatomy and Physiology	4
PSY	121	General Psychology	3
CHM	121	General Chemistry	4
			17
Semester II			
NUR	221	Nursing Care of Persons with Alterations in Health I	6
BIO	122	Anatomy and Physiology II	4
CHM	122	Organic and Biological Chemistry	4
ENG	124	College Composition†	3
			17
Summer			
NUR	122	Nursing Care of Child-bearing Family	4
NUR	123	Nursing Care of Children	4
PSY	123	Human Growth and Development	3
			11
Semester III			
NUR	222	Nursing Care of Persons with Alterations in Health II	8
BIO	221	Principles of Microbiology	4
SOC	121	Sociology	3
			15
Semester IV			
NUR	224	Nursing Seminar	1
NUR	223	Nursing Care of Persons with Alterations in Health III	8
ENG	224	Composition and Literature	3
			12

72 TOTAL CREDIT HOURS

LPN to RN Sequence

SUGGESTED COURSE SEQUENCE

			Credit Hours
Summer			
NUR	201	Transition for the LPN	5
PSY	123	Human Growth and Development	3
			8
Fall			
NUR	222	Nursing Care of Persons with Alterations in Health II	8
BIO	221	Principles of Microbiology	4
SOC	121	Sociology	3
			15
Spring			
NUR	224	Nursing Seminar	1
NUR	223	Nursing Care of Persons with Alterations in Health III	8
ENG	224	Composition and Literature	3
			12

35 TOTAL CREDIT HOURS

† Based on SSCT placement score.

A 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 the day-to-day living activities of self-care, work, leisure and play.

Assistants help therapists in evaluating patients to determine patient and family needs. Once the therapist sets the treatment goals students 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 biology and one year of high school algebra.

Graduates may sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification of Occupational Therapy (NBCOT). After successful completion of this exam, the graduates will be a certified occupational therapy assistant (COTA). Many states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Exam.

The occupational therapy assistant technology program is accredited by the Accreditation Council for Occupational Therapy Education, 4720 Montgomery Lane, P.O. Box 31220 Bethesda, MD 20824-1220 • 301-652-2682.

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Occupational Therapy Assistant (OTA) Technology

SUGGESTED COURSE SEQUENCE

			Credit Hours
Semester I			
BIO	125	Medical Terminology	3
PSY	121	General Psychology	3
ENG	124	College Composition†	3
OTA	121	Foundations of Occupational Therapy	3
OTA	122	Therapeutic Media	3
			15
Semester II			
PSY	221	Abnormal Psychology	3
ENG	122	Communication Theory	3
BIO	123	Human Structure and Function	5
OTA	123	Psychosocial Aspects in Occupational Therapy	4
OTA	124	Psychosocial Clinical Experience	3
			18
Semester III			
OTA	223	Life Span Development	5
OTA	221	Developmental Aspects in Occupational Therapy	4
OTA	222	Developmental Clinical Experience	3
PTA	226	Functional Anatomy	4
			16
Semester IV			
BIO	124	Pathiophysiology	3
SOC	121	Sociology	3
OTA	224	OT Physical Dysfunction	4
OTA	225	Physical Dysfunction Clinical Experience	3
			13
Semester V			
OTA	226	OTA Seminar	2
OTA	227	Clinical Application I	3
OTA	228	Clinical Application II	3
			8

70 SEMESTER CREDITS

† Based on SSCT placement score.

All OTA students must complete Level II fieldwork within 18 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 alcohol/drugs or a felony may be denied certification or licensure or may be refused placement by the Fieldwork Experience Sites or may have restrictions placed on their ability to practice. Such persons are advised to contact the director of OTAT, the OT section of the Ohio OT/PT/AT Board, and/or NBCOT.

A 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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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 aspects of the physical therapist assistant technology, graduates are eligible to take the state licensing examination. 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.

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			
BIO	125	Medical Terminology	3
PTA	121	Fundamentals of Physical Therapy	4
PTA	122	Musculoskeletal Anatomy	4
ENG	122	Communication Theory	3
BIO	123	Principles of Human Structure and Function	5
			19
Semester II			
PHY	101	Principles of Physics	4
PTA	123	Kinesiology	4
PTA	221	PTA Procedures I	5
BIO	124	Pathophysiology	3
			16
Semester III (Summer)			
PTA	124	Measurement Procedures for the PTA	2
PSY	121	General Psychology	3
ENG	124	College Composition†	3
PTA	125	Professional Clinical Practice for the PTA	1
			9
Semester IV			
PSY	222	Psychological Aspects of Therapy	3
PTA	222	PTA Procedures II	5
OTA	223	Life Span Development	5
PTA	229	Directed Practice I	3
PTA	228	Seminar I	2
			18
Semester V			
PTA	223	PTA Procedures III	2
PTA	231	Directed Practice II	2
PTA	230	Seminar II	1
PTA	227	Directed Practice III	3
			8

70 SEMESTER CREDITS

†Based on SSCT placement score.
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.

TECH PREP
A TECH PREP PARTICIPANT

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Respiratory Care Technology

Respiratory care is a health-care 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).

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			
RCT	121	Introduction to Respiratory Care Procedures	3
RCT	122	Medical Gas Administration	3
MTH	123	Intermediate Algebra	3
BIO	123	Human Structure and Function	5
ENG	124	College Composition†	3
			17
Semester II			
CHM	121	General Chemistry	4
RCT	123	Airway Management Procedure	3
RCT	124	Pharmacology for Respiratory Therapy	2
RCT	125	Clinical Practice Basic Procedures/Seminar	3
		Social Sciences Elective*	3
			15
Semester III (Summer)			
RCT	126	Introduction to Critical Care	3
RCT	127	Cardiopulmonary Anatomy and Physiology	3
RCT	128	Clinical Practice Airway Management/Seminar	2
			8
Semester IV			
ENG	122	Communication Theory	3
BIO	221	Principles of Microbiology	4
RCT	221	Advanced Respiratory Care Procedures	3
RCT	222	Respiratory Diseases	3
RCT	224	Clinical Practice Critical Care/Seminar	3
			16
Semester V			
CAP	120	Business Computer Applications	4
RCT	223	Patient Assessment and Monitoring	3
RCT	225	Clinical Practice Specialty Rotations/Seminar	5
		Psychology Elective**	3
			15

71 SEMESTER CREDITS

* May select from Sociology offerings only.
** May select from Psychology offerings only.
† Based on SSCT placement score.

TECH PREP
A 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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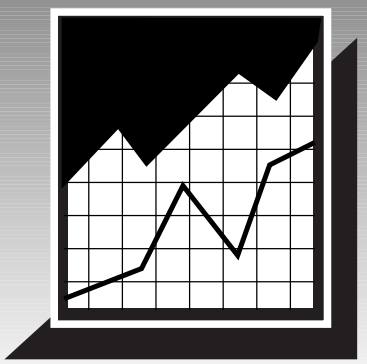


Course Descriptions Business Technologies

"Contact hours" may involve lecture, laboratory and/or other instructor-directed activities.

Accounting Technology

ACC121
PRINCIPLES OF ACCOUNTING I
4 Credit Hours 4 Contact Hours

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.
Corequisite: BUS123

ACC122
PRINCIPLES OF ACCOUNTING II
4 Credit Hours 4 Contact Hours

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.
Prerequisite: ACC121

ACC124
TAXATION
4 Credit Hours 4 Contact Hours

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.
Prerequisites: ACC122 or ACC132

ACC127
QUANTITATIVE METHODS OF ACCOUNTING AND FINANCE
4 Credit Hours 4 Contact Hours

This course covers the study of present value, future value, annuities, statistics and other analytical procedures as they apply to accounting and finance. Upon successful completion of this course, students should be able to perform the calculations necessary for use in the accounting and finance courses.
Prerequisite: MTH101

ACC130
BUSINESS LAW AND ETHICS
3 Credit Hours 3 Contact Hours

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 Credit Hours 4 Contact Hours

The course introduces the concepts of accounting information, the accounting-cycle, and financial accounting principles. This course is a fundamental study of the principles and procedures of accounting as applied to sole proprietorships, partnerships and corporations. Upon completion, students should be able to demonstrate competence in applying financial principles and procedures as related to these forms of business ownership. ACC121 and ACC122 may be substituted for this course.
Corequisite: BUS123

ACC133
MANAGERIAL ACCOUNTING
4 Credit Hours 4 Contact Hours

This course has an emphasis placed on accounting as a tool for planning and control. We examine the statement of cash flows; ratios; cost behavior; cost-volume-profit analysis; operational, financial, and capital budgeting; and other decision criteria. Upon successful completion of this course, the student should be able to apply fundamental concepts of managerial accounting in making business decisions.

Prerequisites: ACC122 or ACC132

ACC134
INTERNATIONAL LAW
3 Credit Hours 3 Contact Hours

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.

Prerequisite: ACC130

ACC221
INTERMEDIATE ACCOUNTING I
4 Credit Hours 4 Contact Hours

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.

Prerequisites: ACC127, ACC122 or ACC132

ACC222
INTERMEDIATE ACCOUNTING II
4 Credit Hours 4 Contact Hours

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 clash flows.

Prerequisite: ACC221

ACC223
COST ACCOUNTING
4 Credit Hours 4 Contact Hours

This course places an emphasis on manufacturing and service organizations. Topics include job costing, process costing, activity-based costing/activity-based management, standard costing and analysis of cost variances. Upon completion of this course, the student should be able to apply fundamental concepts of cost accounting in making business decisions.

Prerequisite: ACC133

ACC225
AUDITING
4 Credit Hours 4 Contact Hours

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 an audit.

Prerequisite: ACC222

ACC226
ADVANCED ACCOUNTING
3 Credit Hours 4 Contact Hours

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 intercorporate 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.

Prerequisite: ACC222

ACC227
CURRENT ACCOUNTING TOPICS
3 Credit Hours 3 Contact Hours

A practical course involving the detailed study of current accounting practice in areas of special interest. Topics included are payroll, receivables, payables, and other emerging issues. The record-keeping, reporting and legal requirements of each area are covered. Upon successful completion of this course, the student should be proficient in the procedures and handling of the records involved in the topics covered.

Prerequisites: ACC122 or ACC132

ACC228
ADVANCED TAXATION
3 Credit Hours 3 Contact Hours

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.

Prerequisite: ACC124

ACC229
ACCOUNTING PRACTICES AND PROBLEMS
3 Credit Hours 4 Contact Hours

This course involves the application of the student's accounting knowledge in an automated setting. The student will record and report accounting information using various commercial accounting systems on the personal computer. Upon successful completion, the student should have a functional knowledge of automated accounting systems.

Prerequisites: CAP120, ACC122 or ACC132

ACC232
GOVERNMENT AND NOT-FOR-PROFIT ACCOUNTING
3 Credit Hours 3 Contact Hours

This is an elective course in accounting for governmental and not-for-profit organizations. Upon completion of the course, the student should be able to discuss the budget, control and accounting processes for entities in these areas and assist in the preparation of their financial statements.

Corequisite: ACC222

Administrative Information Technologies

OAD100
COMPUTER APPLICATIONS WINDOWS AND CONCEPTS
1 Credit Hour 2 Contact Hours

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.

Prerequisite: CAL104

OAD101
KEYBOARDING AND DATA INPUT METHODS
1 Credit Hour 2 Contact Hours

Upon completion, the student will have working knowledge and basic skills in alpha-numeric touch keyboarding. Scanning, optical character recognition and voice input methods of data input will also be covered. No prior knowledge of keyboarding is required.

OAD102
COMPUTER APPLICATIONS MICROSOFT WORD
1 Credit Hour 2 Contact Hours

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.

Prerequisite: OAD101, CAL104

OAD104
COMPUTER APPLICATIONS - POWERPOINT
1 Credit Hour 2 Contact Hours

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.

Prerequisite: CAL104

OAD105
COMPUTER APPLICATIONS - EXCEL
1 Credit Hour 2 Contact Hours

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.

Prerequisite: CAL104

OAD106
COMPUTER APPLICATIONS - ACCESS
1 Credit Hour 2 Contact Hours

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.

Prerequisite: CAL104

OAD121
KEYBOARDING/FORMATTING
3 Credit Hours 4 Contact Hours

This course is designed to refine the fundamentals of "touch" control of the keyboard and proper keyboarding techniques. 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.

Prerequisite: OAD101

OAD127
WORD PROCESSING - MICROSOFT WORD
3 Credit Hours 4 Contact Hours

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.

Prerequisites: OAD121, CAP120

OAD128
DESKTOP PUBLISHING - MICROSOFT PUBLISHER
3 Credit Hours 4 Contact Hours

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.

Prerequisites: CAP120, OAD131

OAD129
KEYBOARDING/SKILLBUILDING
1 Credit Hour 2 Contact Hours

This course is designed to give students an opportunity to further develop and refine keyboarding skills. Emphasis of 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.

Prerequisite: OAD121

OAD130
COMMUNICATION AND TRANSCRIPTION SKILLS
3 Credit Hours 3 Contact Hours

This course emphasizes the elements of written communication including spelling, grammar, punctuation and word usage for the transcription and preparation of business documents. Upon completion, students should be able to use proper grammar and punctuation skills in written and oral communication.

OAD131
GRAPHIC DESIGN CONCEPTS
3 Credit Hours 4 Contact Hours

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.

Prerequisite: OAD132

OAD132
INTRODUCTION TO RECORDS MANAGEMENT
3 Credit Hours 4 Contact Hours

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 Credit Hours 4 Contact Hours

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 nonlitigation 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.

Prerequisites: OAD121, OAD130

OAD225
ADMINISTRATIVE MACHINE TRANSCRIPTION
3 Credit Hours 4 Contact Hours

This course will help the student develop proficiency in producing mailable copy of dictated letters, memos and reports using transcription equipment and word processing software. Continued emphasis is given to language arts and proofreading skills. Upon completion, students should be able to transcribe verbal dictation into mailable printed copy.

Prerequisite: OAD130

OAD226
SPREADSHEETS - MICROSOFT EXCEL
3 Credit Hours 4 Contact Hours

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.

Prerequisite: CAP120

OAD227
ADMINISTRATION PROCEDURES SYSTEMS
3 Credit Hours 4 Contact Hours

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, copiers, 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.

Prerequisites: OAD122, OAD130

OAD232
ADMINISTRATIVE INFORMATION TECHNOLOGIES PRACTICUM
3 Credit Hours 6 Contact Hours

Students are assigned to work for college faculty or staff or to businesses outside the college. Students will meet in class two hours per week with an instructor. Students produce documents and write a report describing their practicum experience. Upon completion, students should be able to demonstrate proficiency in office administrative tasks and skills in a work environment.

OAD234
ADMINISTRATIVE INFORMATION TECHNOLOGIES SPECIAL TOPICS
2 Credit Hours 2 Contact Hours

Selected topics on areas of interest to office administration majors through seminar meetings and/or individualized research. Upon completion, students should be knowledgeable in current trends and issues in administrative information technology.

OAD235
LEGAL RESEARCH AND WRITING
3 Credit Hours 4 Contact Hours

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.

OAD236
DATABASE APPLICATIONS - MICROSOFT ACCESS
3 Credit Hours 4 Contact Hours

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.
Prerequisite: CAP120

OAD237
LEGAL OFFICE APPLICATIONS
3 Credit Hours 4 Contact Hours

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 legal 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 a word processing software.
Prerequisites: CCR128, OAD224

OAD238
MICROSOFT FRONT PAGE
3 Credit Hours 4 Contact Hours

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.
Prerequisites: OAD131, CAP120

Business Technology

BUS121
BUSINESS ADMINISTRATION
4 Credit Hours 4 Contact Hours

A survey course designed to develop a comprehension of business theories and principles. Students will examine the following: American business development, management and organization, the human resource, 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.
Prerequisite: ENG102 or proficiency

BUS122
BASIC ECONOMICS
3 Credit Hours 3 Contact Hours

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.
Prerequisite: ENG102 or proficiency

BUS123
BUSINESS MATHEMATICS
4 Credit Hours 4 Contact Hours

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.
Prerequisites: CAL103, MTH101

BUS221
MICROECONOMICS
3 Credit Hours 3 Contact Hours

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.
Prerequisite: ENG102 or proficiency

BUS222
MACROECONOMICS
3 Credit Hours 3 Contact Hours

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.

Prerequisite: ENG102 or proficiency

BUS223
INTERNATIONAL BANKING
3 Credit Hours 3 Contact Hours

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.

Prerequisite: BUS221

Special Courses in Business Technology Division

BTD201
BUSINESS TECHNOLOGY DIVISION INDEPENDENT STUDY
1 Credit Hour 10 Contact Hours

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 TECHNOLOGY DIVISION INDEPENDENT STUDY
2 Credit Hours 20 Contact Hours

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 TECHNOLOGY DIVISION INDEPENDENT STUDY
3 Credit Hours 30 Contact Hours

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.

BTD204
BUSINESS TECHNOLOGY DIVISION INDEPENDENT STUDY
4 Credit Hours 40 Contact Hours

An independent student 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 core content, meeting schedules and credit hours.

BTD222
BUSINESS TECHNOLOGY DIVISION CO-OP
2 Credit Hours 20 Contact Hours

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 TECHNOLOGY DIVISION CO-OP
3 Credit Hours 30 Contact Hours

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 TECHNOLOGY DIVISION CO-OP
4 Credit Hours 40 Contact Hours

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 Credit Hour 1 Contact Hour

Special topics in business technology division. Repeat registration permitted.

BTD226
SPECIAL TOPICS
2 Credit Hours 2 Contact Hours

Special topics in business technology division. Repeat registration permitted.

BTD227
SPECIAL TOPICS
3 Credit Hours 3 Contact Hours

Special topics in business technology division. Repeat registration permitted.

BTD228
SPECIAL TOPICS
4 Credit Hours 4 Contact Hours

Special topics in business technology division. Repeat registration permitted.

Computer Technology

CAP120
BUSINESS COMPUTER APPLICATIONS
4 Credit Hours 5 Contact Hours

Business Computer Applications is designed to present the essential concepts of Microsoft Office 2000 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 and business graphics.

Prerequisites: CAL104, OAD101

CAP121
INTRODUCTION TO COMPUTER PROGRAMMING
4 Credit Hours 5 Contact Hours

This course introduces the student to the basic concepts of data processing and programming procedures. Primary emphasis is on achieving fundamental familiarity with hardware, software, and basic programming techniques. Computer time gives the student exposure to computer systems and the opportunity to develop confidence and skill in understanding a programming language. This course allows the student to become computer literate and requires no prior knowledge of computer systems. Upon completion, student should have an elementary understanding of computer hardware, software, and basic programming techniques.

Prerequisites: OAD101, MTH101, ENG101

CAP125
ADVANCED MICROCOMPUTER APPLICATIONS
4 Credit Hours 5 Contact Hours

This course is designed to extend and solidify the students knowledge of Microsoft Office 2000. Upon completion, students should be able to demonstrate the ability to create and manipulate sophisticated documents, workbooks, databases, and presentations suitable for coursework and professional purposes.

Prerequisites: CAP121 or CAP120

CAP126
VISUAL BASIC PROGRAMMING
4 Credit Hours 5 Contact Hours

The intent of this course is to cover all essential aspects of Visual Basic for Windows. Upon completion, the student should have a firm knowledge of Visual Basic concepts and should be able to develop a wide variety of Windows applications. Further, because they will be learning to develop Windows applications, students will find the migration to other Windows applications software to be relatively simple and straightforward.

Prerequisite: CAP121

CAP127
COBOL PROGRAMMING I
4 Credit Hours 5 Contact Hours

Develop a working knowledge of the COBOL language for solving typical business problems. COBOL structure, language syntax, structure charts, debugging, testing and program execution. Upon completion, the student should be able to write, test and debug a simple COBOL program from a set of program specifications.

Prerequisite: CAP121

CAP128
COBOL PROGRAMMING II
4 Credit Hours 5 Contact Hours

Advanced problem-solving using the COBOL language to solve typical business problems. Sorting, table handling, multiple control breaks and multiple file processing. Upon completion, the student should be able to design, write, test and debug a complex COBOL program from a set of program specifications.

Prerequisite: CAP127

CAP129
RPG/400 PROGRAMMING I
3 Credit Hours 4 Contact Hours

This course introduces the student to RPG/400 Structured Design/Top-down methodology in the computer programming process. It includes the introductory background material for programming and the basics of writing RPG/400 programs for popular business applications. Upon completion, students should have the ability to interact with RPG/400 software at the programming level, and they should be able to write elementary structured programs for commonly used business applications using the RPG language.

Prerequisite: CAP121
Corequisite: CAP138

CAP130
RPG/400 PROGRAMMING II
3 Credit Hours 4 Contact Hours

Advanced study of the RPG/400 programming language. Students will explore disk file creation and manipulation, table and array handling, and the ability to create online interactive applications. File maintenance, file updating, and other advanced programming techniques will also be explored. Upon completion, students should be able to create and maintain files, use table and arrays in their RPG programs, and be able to generate and maintain online interactive screens and programs.

Prerequisite: CAP129

CAP133
DATA MODELING AND DESIGN
3 Credit Hours 4 Contact Hours

This course is designed to provide the student with the concepts and hands-on design of data models, databases and data warehousing. The primary focus is on learning the structural architecture needs for the various types of database models. Upon completion, the student will have obtained a skill level necessary to design and evaluate basic database architectures.

Prerequisite: CAP121
Prerequisite or Corequisite: one computer programming course

CAP136
NETWARE ADMINISTRATION
4 Credit Hours 5 Contact Hours

This course will present the fundamental network management concepts necessary to manage a NetWare network. Upon completion, the student should be able to manage network access, distribute print services, manage file systems and file system security, create and manage login scripts, distribute and manage network applications, and manage workstations in a NDS environment.

Prerequisite: CAP253

CAP137
MULTIMEDIA TOOLS, DESIGN AND DEVELOPMENT
4 Credit Hours 5 Contact Hours

This course covers all phases of the implementation and use of microcomputer-based multimedia equipment and software. Topics will include choosing microcomputer hardware components; determining the appropriate software; design techniques; and creation, evaluation and revision of multimedia presentations. Upon completing the course, the student should be able to identify hardware and software required to develop multimedia, use a variety of tools to create multimedia and design and create a multimedia project.

Prerequisite: CAP125 or CAP257

CAP138
AS/400 CONCEPTS AND FACILITIES
4 Credit Hours 5 Contact Hours

This is an introductory course covering the fundamental operations, screens and terminology of the AS/400 Operating system. Exposure is given to different CL commands and menus used to create, maintain, and manipulate libraries, objects and members on the AS/400 system. Students should receive a solid foundation in AS/400 library-object structure, utilities and database management capabilities as well as application development tools and the OS/400 Control Language.

Prerequisite: CAP121

CAP139
INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS
4 Credit Hours 5 Contact Hours

This course is the first in a series that explores the concepts and application of a database in the business environment. The students will use the SQL language to write stored procedures, triggers and to create other objects in a database. Upon completion, the student should be able to apply the use of SQL to query, create, and manage database objects.

Prerequisite: CAP121

CAP141
DATABASE DEVELOPMENT TOOLS
4 Credit Hours 5 Contact Hours

This course will introduce the use of a RDBMS Developer tool for designing and developing forms and reports. The student will learn to develop forms and reports that access a relational database. Upon completion, the student should be able to resolve development issues in a database environment.

Prerequisite: CAP139

CAP142
DATABASE ADMINISTRATION
4 Credit Hours 5 Contact Hours

This course is the second in a series that explores the concepts and application of a relational database in the business environment. The students will use SQL and Enterprise Manager (EOM) to manage and administrate a relational database. Upon completion, the student should be able to apply the use of SQL and EOM to query, create and delete database objects as well as manage the internals of a database.

Prerequisite: CAP139

CAP143
MICROSOFT SQL ADMINISTRATION
4 Credit Hours 5 Contact Hours

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 Database Administrator perspective. Upon completion, the student will have obtained at least a basic administration skill level with SQL Server database.

Prerequisite: CAP121

CAP221
RELATIONAL DATABASE
4 Credit Hours 5 Contact Hours

Develop a working knowledge of basic relational database concepts including Structured Query Language (SQL), relational database design, entity relationship (E-R) diagrams and normalization. Upon completion, the student should be able to design, build and load a relational database and produce SQL reports using a DB2/400 database.

Prerequisite: CAP121

CAP223
MICROSOFT ACCESS PROGRAMMING
4 Credit Hours 5 Contact Hours

This course introduces the student to the basic concepts of Database Management Systems and the conceptual analysis of their purpose and use. Primary emphasis is on acquiring a working knowledge of a database management system. A hands-on approach will allow the student to learn by doing while they organize data for use in multiple business applications. The student will work through prepared assignments using a popular software package. Upon completion, the student should be able to develop confidence and skill by developing, maintaining and using database applications.

Prerequisite: CAP121

CAP224
ADVANCED MICROSOFT ACCESS PROGRAMMING
4 Credit Hours 5 Contact Hours

This course is a continuation of Microsoft Access Programming and will explore the concepts and applications of the current state-of-the-art Relational Database Management Systems. The students will use application generation tools for the creation of reports, forms, tables, queries and menus. A version of a Relational Database Management System will be used to provide a friendly yet comprehensive environment to develop and maintain customized database applications as they apply to common business applications. Upon completion, the student should be able to apply the use of a relational database and its tools to develop business solutions.

Prerequisite: CAP223

CAP227
SYSTEMS DESIGN AND DEVELOPMENT
4 Credit Hours 5 Contact Hours

This course helps develop skills in system investigation, design and development in a simulated or actual real-life situation. Students working in small groups (two students per group) will investigate and then design a data processing system or sub-system. Upon completion, students should have the ability to analyze a problem and design an appropriate solution using a combination of tools and techniques.

Prerequisites: completion of two computer programming courses.

CAP228
ADVANCED TOPICS IN DP
4 Credit Hours 5 Contact Hours

This course covers various subject areas in the application of computers. The course content varies based on current technology in the computer industry. It provides the student with the opportunity to research areas of interest within the computer field. Upon completion, the student should have gained an in-depth understanding of one or two computer-related areas and be able to give a presentation to an audience of peers.

Prerequisites: ENG124, SPH121, completion of three computer courses with CAP prefixes.

CAP231
DATA PROCESSING FIELD PROJECT
4 Credit Hours 5 Contact Hours

This course is intended to exercise the data processing skills acquired by the participants and to put those skills to work in a simulated or real-life situation. Upon completion, students should have the ability to implement a computer system or sub-system to serve the needs of the user.

Prerequisite: CAP227

CAP235
ADVANCED C++ PROGRAMMING FOR BUSINESS
4 Credit Hours 5 Contact Hours

This course will build on the foundation developed in CAP242. The student will master the fundamentals of Object Oriented Programming using the C++ programming language. Topics covered will include class and data abstraction, operator overloading, inheritance, virtual functions and polymorphism. Upon completion, the student should be able to design, write, test and debug a complex program in the C++ programming environment.

Prerequisite: CAP242

CAP239
INTRODUCTION TO THE INTERNET
1 Credit Hour 2 Contact Hours

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.

CAP241
JAVA PROGRAMMING FOR BUSINESS
4 Credit Hours 5 Contact Hours

This is an introductory course in programming business applications using the Java programming language. The student will learn both object-oriented programming concepts as well as basic programming concepts such as variables, loops, if tests, and arrays. Upon completing this course the student will be able to write both applications and applets that utilize basic object oriented programming concepts.

Prerequisite: CAP121

CAP242
C++ PROGRAMMING FOR BUSINESS
4 Credit Hours 5 Contact Hours

This course focuses on the planning and creating of well-structured C++ programs. Students will learn how to write programs in C++ using the sequence, selection and repetition structures as well as how to create and manipulate sequential Access files, STRUCTS, CLASSES and ARRAYS.

Prerequisite: CAP121

CAP243
WEB TOOLS, DESIGN AND DEVELOPMENT
3 Credit Hours 4 Contact Hours

The student will learn concepts of web page design and implement these concepts through mastery of basic and intermediate HTML concepts. The student will also gain exposure to a suite of multimedia design tools. Upon completion, the student should be able to demonstrate mastery of these tools/techniques by completing a web design project.

Prerequisite: CAP121

CAP244
CL PROGRAMMING
4 Credit Hours 5 Contact Hours

This course will provide students an understanding of (C)ontrol (L)anguage programming, message handling and debugging techniques. Students will also learn advanced CL programming techniques such as OPNQRYF, creating their own commands and applying contextual help to their commands.

Prerequisite: CAP138

CAP245
ADVANCED PROGRAMMING WITH RPG IV
3 Credit Hours 4 Contact Hours

Students learn how to create RPV IV source files, convert RPG/400 source into RPG IV source, use new C-spec operations and built-in functions, create modules and programs, and debug interactive and batch programs. An overview of the Integrated Language Environment is also provided.

Prerequisite: CAP130

CAP246
ADVANCED VISUAL BASIC PROGRAMMING
3 Credit Hours 4 Contact Hours

This course is a continuation of Visual Basic Programming. Students will use Visual Basic for the creation of text files, database interfaces, ActiveX controls, and multiple document interface applications. Upon completion, the student will be able to implement complex Visual Basic applications applying these tools.

Prerequisite: CAP126

CAP247
ADVANCED JAVA PROGRAMMING FOR BUSINESS
3 Credit Hours 4 Contact Hours

This course is a continuation of Java Programming for Business. Students will learn to develop applications using inheritance, exceptions, and input and output streams. Students will also gain exposure to such advanced Java topics as JavaBeans, Network Programming, creating graphical user interfaces, programming windows and events, and creating applets that will run in a Web browser.

Prerequisite: CAP241

CAP248
ADVANCED DATABASE DEVELOPMENT TOOLS
4 Credit Hours 5 Contact Hours

The course is a continuation of Database Development Tools. The student will continue to develop forms and reports that access a relational database. Upon completion, the student should be able to resolve advanced development issues in a database environment.

Prerequisite: CAP141

CAP249
DATABASE NETWORK ARCHITECTURE
4 Credit Hours 5 Contact Hours

This course is designed to provide the student with the concepts and hands-on troubleshooting methods that are used in relational database systems. The students will perform labs that demonstrate potential problems that can occur in today's business system environments. Upon completion, the student should be able to establish a relational network architecture.

Prerequisite: CAP139

CAP250
ADVANCED DATABASE ADMINISTRATION
4 Credit Hours 5 Contact Hours

This course is the last in a series that explores the concepts and application of relational database in the business environment. The students will use various tools to implement, manage and administrate advanced database structures. Upon completion, the student should be able to apply the use of tools to manipulate data stores, data marts and data warehouse type databases.

Prerequisite: CAP142

CAP251
ADVANCED NETWARE ADMINISTRATION
3 Credit Hours 4 Contact Hours

This course provides students with the knowledge and skills they need to design, configure and administer a complex Netware network. Skills learned include upgrading from a Netware environment, migrating to Netware distributed print services, executing Java based utilities, network backup and configuring Netware for remote access.

Prerequisite: CAP136

CAP253
NETWORKING TECHNOLOGIES
3 Credit Hours 3 Contact Hours

This course provides the student with a foundation upon which to build network training. It covers the basics of computer networking, including terms and concepts. Concepts such as network services, transmission media and protocols are explained. Students will learn how protocols are used in networking implementations, especially those most common in today's LAN's and WAN's.

Prerequisite: CAP121

CAP254
DEVELOPING AS/400 APPLICATIONS FOR THE INTERNET
4 Credit Hours 5 Contact Hours

Students learn to build Web-based applications quickly through using a variety of tools and utilities including Visual Age Java to write Web page scripts, RPG to write back-office CGI programs, and the Websphere application developer.

Prerequisite: CAP130

CAP255
ADVANCED MICROSOFT SQL ADMINISTRATION
4 Credit Hours 5 Contact Hours

This course is designed to enhance the skills of the student, by providing advanced Database Administrator concepts. Students will also become skilled in the creating and maintenance of Transact SQL objects, for use in the SQL Server environment. Upon completion, the student will have obtained at least an intermediate administration skill level with SQL Server database.

Prerequisite: CAP143

CAP256
MICROSOFT SQL DATA WAREHOUSING
4 Credit Hours 5 Contact Hours

This course is designed to complete the skills development of the student, by providing exposure to SQL Server data warehousing concepts. Students will become skilled in the management of OLAP objects, used in the SQL Server environment. Upon completion, the student will be able to provide administration to SQL Server databases, and to SQL Server data warehouses.

Prerequisite: CAP255

CAP257
MICROCOMPUTER APPLICATIONS FOR APPLICATION DEVELOPERS
4 Credit Hours 5 Contact Hours

This course is designed to present Microsoft Office concepts to students in the computer field. This is a fast paced course that will focus on Microsoft Office concepts that are important to application developers. Upon completion, students should be able to demonstrate competency in advanced areas of document, workbook, database, and presentation development to solve a variety of computer-related business application problems.

Prerequisite: CAP121 or instructor approval.

CAP258
CLIENT WEB SCRIPTING
3 Credit Hours 4 Contact Hours

This course will emphasize the use of JavaScript to develop interactive and dynamic user interfaces and integrate databases into Websites. Topics covered will include variables, functions, objects, and events; windows and frames; forms; Dynamic HTML; cookies and security.

Prerequisite: CAP243

CAP259
LINUX OPERATING SYSTEM
3 Credit Hours 4 Contact Hours

This is an introductory course on the Linux operating system. The student will learn the fundamentals of different operating systems and where Linux fits in among them. The student will learn to install Linux and will gain knowledge of the various shells (script languages and graphic interfaces). The course will also include an introduction to utility programs including Star Office.

Prerequisite: CAP253

CAP260
DEVELOPING DATA-DRIVEN WEBSITES
3 Credit Hours 4 Contact Hours

This course will introduce the student to designing and implementing a relational database using Microsoft Access. The student will also become familiar with different approaches for creating Web pages that interact with a database including client-side scripts, server-side scripts, and compiled server programs using CGI.

Prerequisite: CAP258

CAP261
SERVER WEB PROGRAMMING
3 Credit Hours 4 Contact Hours

This course will focus on developing and maintaining interactive and dynamic Web applications within the server-based scripting environment of Active Server Pages. Topics covered will include variables, ASP control structures, request and response object, sessions and cookies, and error handling.

Prerequisite: CAP258

Information Reporting Technology

CCR121
CR THEORY I
4 Credit Hours 8 Contact Hours
Introduction to stenotype machine theory and technique, with emphasis on recording, notereading, 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 in CR Theory I.

CCR122
CR THEORY II
4 Credit Hours 8 Contact Hours
Mastery of stenotype machine theory and technique. Instruction and practice to develop recording, notereading 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.
Prerequisite: CCR121

CCR123
SPEEDBUILDING III
2 Credit Hours 6 Contact Hours
A required lab for skill development refining techniques necessary for perfecting speed and accuracy in transcription of specialized dictation material. Complete weekly activities, practice realtime/captioning on stenograph machine, use online computer-aided transcription technology. This course is designed for self-paced modular instruction and shall incorporate the use of Web-enhanced instruction. This lab is designed to prepare students to write graduation speed requirements in the information reporting technology program, which include passing three five-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 for the judicial reporting option; and literary at 200 wpm with 98% accuracy for the captioning option. At least two five-minute keyboarding tests from unfamiliar material at a minimum of 60 nwpm must be passed for both options listed above. Upon graduation, students should be able to pass the skills portion of the Registered Professional Reporter exam
Prerequisite: CCR130

CCR128
LEGAL TRANSCRIPTION
3 Credit Hours 4 Contact Hours
Designed to prepare students to perform legal transcription in a law office or other legal setting. Classroom instruction 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.
Prerequisites: OAD130, OAD224
Corequisite: OAD129

CCR129
SPEED BUILDING I
4 Credit Hours 8 Contact Hours
Designed to increase speed, endurance and accuracy for reporting of multi-voice testimony, jury charge, 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.
Prerequisites: CCR122, OAD121

CCR130
SPEED BUILDING II
4 Credit Hours 8 Contact Hours
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.
Prerequisite: CCR129

CCR131
LEGAL TERMINOLOGY
1 Credit Hours 2 Contact Hours
Instruction in legal terminology in civil law; criminal law; and the discovery, trial and appellate processes. Upon completion, the student should be able to comprehend and use legal terms.

CCR228
REALTIME TRANSCRIPTION
3 Credit Hours 4 Contact Hours

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 student's choice of career option. Upon completion, students should be able to proficiently transcribe and format documents.

Prerequisites: BIO125, CCR129

CCR229
REALTIME SOFTWARE APPLICATIONS
3 Credit Hours 4 Contact Hours

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 stenograph machine; reading, translating, and editing the verbatim testimony to produce the legal transcript; file maintenance; dictionary building; EZ keys, globalizing entries; etc. Upon completion, students should be able to demonstrate knowledge and skills in operating and utilizing the different aspects of the realtime court reporting software.

Prerequisite: CCR122

CCR130
SPEED BUILDING II
4.00 Credit Hours 8.00 Class Hours

Designed to increase speed, endurance, and accuracy for reporting of multi- voice testimony, jury charge, legal, and technical material. A machine speed of 150 wpm is the goal. Emphasis on development of vocabulary, grammar, punctuation, notereading, and realtime writing skills. Instruction shall include the use of on-line, computer-aided transcription technology with teacher interaction. Speed Building I through IV are designed for self-paced modular instruction. Upon completion of each module, the student should progress continually at his/her own speed throughout the program.

Prerequisites: CCR129

CCR231
JUDICIAL PROCEDURES
3 Credit Hours 4 Contact Hours

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.

Prerequisites: CCR122, CCR229

CCR232
INFORMATION REPORTING INTERNSHIP
2 Credit Hours 7 Contact Hours

Internship will include a minimum of 50 hours of participation under the supervision of a professional judicial reporter, captioner, or transcriptionist, depending on the chosen option for each student. Each option will have specific criteria which must be met for course evaluation. Upon completion, the student should be able to work in the chosen field of study.

Prerequisite: CCR130
Corequisite: CCR123

Financial Services Technology

FIN122
PRINCIPLES OF FINANCE
4 Credit Hours 4 Contact Hours

This is an exit-level course designed for accounting 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.

Prerequisites: ACC127, ACC221

FIN123
FUNDAMENTAL FINANCIAL SERVICES
3 Credit Hours 4 Contact Hours

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.

FIN221
INVESTMENT AND SECURITIES
4 Credit Hours 4 Contact Hours

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.

Prerequisites: ACC122 or ACC132

FIN222
RETIREMENT PLANNING FOR EMPLOYEES
3 Credit Hours 4 Contact Hours

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.

Prerequisites: FIN123, ACC124

FIN223
ESTATE AND INCOME TAX PLANNING
3 Credit Hours 4 Contact Hours

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.

Prerequisites: FIN123, ACC124

FIN224
INSURANCE PLANNING
3 Credit Hours 4 Contact Hours

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, the student should be able to select the most appropriate insurance program for themselves and their families.

FIN225
FINANCIAL SERVICES CASES/PRACTICUM
3 Credit Hours 4 Contact Hours

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.

Prerequisites: FIN221, FIN224
Corequisites: FIN222, FIN223

Management Technology

MGT121
PRINCIPLES OF MANAGEMENT
3 Credit Hours 3 Contact Hours

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.

Prerequisite: BUS121

MGT221
FIRST-LINE SUPERVISION
3 Credit Hours 3 Contact Hours

This course is organized around the employee in order to emphasize th 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.

Prerequisite: MGT121

MGT222
SMALL BUSINESS MANAGEMENT
3 Credit Hours 3 Contact Hours

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.

Prerequisite: ACC133

MGT223
BUSINESS DECISION MAKING
3 Credit Hours 4 Contact Hours

This course provides a variety of experiences in competitive business decision-making. Requires intense involvement in managerial problems that closely approximate the actual business environment. Analysis of production, inventory, financial performance, research and development, pricing and promotion provide the basis for the required decisions of the simulation exercise, which is computer-generated and monitored. Upon completion, students should be able to demonstrate an understanding of the above areas.

Prerequisites: MGT121, ACC133

MGT224
HUMAN RESOURCE MANAGEMENT
3 Credit Hours 3 Contact Hours

Introduction to the effective management of human resources in todays' 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.

Prerequisite: MGT121

MGT225
CONTEMPORARY MANAGEMENT ISSUES
2 Credit Hours 2 Contact Hours

Selected topics on subject areas of special interest in business management are studied on an in-depth basis through seminar meetings and individualized research. Upon completion, students should be able to demonstrate an understanding of current issues and current theories relating to management.

Prerequisite: MGT121

MGT226
SALES MANAGEMENT
3 Credit Hours 3 Contact Hours

This course examines the organizational framework in which the sales manager operates by discussing the job and the sales manager's many working relationships in detail and by studying the training, motivation and development of field sales managers. Upon completion, students should be able to demonstrate an understanding of the role the sales manager plays in the business organization.

Prerequisite: MKT221

MGT227
PRODUCTION AND OPERATIONS MANAGEMENT
4 Credit Hours 4 Contact Hours

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.

Prerequisites: MGT233 or MTH222

MGT228
21ST CENTURY LEADERSHIP
4 Credit Hours 4 Contact Hours

This course is designed to provide students with in-depth opportunities to experiment with and practice 21st century management leadership techniques. The class covers practicums, simulations, how to write mission statements, forming teams and dealing with anticipated case scenarios. Students will be expected to facilitate their own learning with the role-modeling aid of the instructor. Critiques of both process and content will be utilized. Upon completion, students should be able to demonstrate an understanding of what it takes to be a leader in the 21st century.

Prerequisite: MGT121

MGT229
QUALITY MANAGEMENT
3 Credit Hours 3 Contact Hours

The purpose of this course is to familiarize the student with the best of the broad array of tools, techniques and philosophies regarding quality management. Students will be introduced to the works of leading theorists in the field. Upon completion, students should be able to demonstrate an understanding of quality management and the works of leading theorists in the field.

Prerequisite: MGT121

MGT230
QUALITY STANDARDS
2 Credit Hours 2 Contact Hours

This course will inform students about the ISO 9000 series of quality management and assurance standards. How the standards were developed, what they entail, how they impact customers and how a company can comply. Other standards such as Military and Government Standards, the Malcom Baldridge Award and the Deming Award will also be explored. Upon completion, students should be able to demonstrate an understanding of the role standards play in the business environment.

Prerequisite: MGT229

MGT231
CUSTOMER SERVICE
2 Credit Hours 2 Contact Hours

This is a course in fundamental negotiating and service after the sale. Areas covered will include: handling customer complaints in a quality fashion, customer retention, measuring customer satisfaction through surveys and other tools. Warranty procedures will also be covered. Upon completion, students should be able to demonstrate an understanding of customer service techniques and the importance of customer service in the business environment.

Prerequisite: MGT121

MGT232
INTERNATIONAL TRADE
3 Credit Hours 3 Contact Hours

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.

Prerequisite: BUS121

MGT233
BUSINESS RESEARCH METHODS
3 Credit Hours 3 Contact Hours

This course deals primarily with business investigation methods, experiment design and results evaluation. The application of statistical methods are used in a research project. Specific statistical information covered includes data display, central tendency and dispersion measures, probability, significance testing and linear data correlation. Upon completion of this course, the student will be able to identify the appropriate research techniques to use and to complete a business research project.

Prerequisite: BUS123

Marketing Technology

MKT121
PRINCIPLES OF MARKETING
3 Credit Hours 3 Contact Hours

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.

Prerequisite: BUS121

MKT221
SALES
3 Credit Hours 3 Contact Hours

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.

Prerequisite: MKT121

MKT222
ADVERTISING
3 Credit Hours 4 Contact Hours

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.

Prerequisite: MKT121

MKT223
BUYING AND MERCHANDISING
3 Credit Hours 3 Contact Hours

This course studies the principles of buying. Views the buying organization and its working relationship with all company divisions. The nature, functions and terminology of merchandising, and planning for buying trips. Also covers principles of visual merchandising concerning hardline and softline merchandise in the retail industry. Areas of emphasis include merchandising history, application of the components and structure of visual merchandising, and self-expression through merchandise techniques. Upon completion, students should be able to demonstrate an understanding of the above mentioned topic areas.

Prerequisite: MKT121

MKT224
TEXTILES
3 Credit Hours 3 Contact Hours

This course explores the importance of knowing textiles and non-textiles in the retail trade. An important feature is the relationship between the construction of textiles and non-textiles to selling and usage. The student will be able to explain and describe the structure of fibers and show how fiber composition and care instructions are correctly conveyed in the marketplace to insure fair trade practices. The student should be able to demonstrate an understanding of textiles and non-textiles in the retail trade.

Prerequisite: MKT121

MKT226
PURCHASING
3 Credit Hours 3 Contact Hours

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.

Prerequisite: MKT121

MKT227
CONSUMER BEHAVIOR
3 Credit Hours 3 Contact Hours

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.

Prerequisite: MKT121

MKT228
BUSINESS TO BUSINESS MARKETING
3 Credit Hours 3 Contact Hours

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.

Prerequisite: MKT121

MKT229
MARKET PLANNING
3 Credit Hours 3 Contact Hours

This course leads the student through the entire planning process that leads to the preparation of an effective marketing plan. Various components of a marketing plan are explored and used to prepare a marketing plan for presentation. Upon completion, students should be able to demonstrate an understanding of the planning process that leads to the preparation of an effective marketing plan.

Prerequisite: MKT121

MKT230
RETAILING
3 Credit Hours 3 Contact Hours

This course provides a comprehensive, in-depth study of the important and rapidly expanding retail sector of the marketplace. The development of retail marketing strategy, site location, merchandising strategy, store operations and retail services marketing are among the topics covered. Upon completion, students should be able to demonstrate an understanding of the retail sector of the marketplace.

Prerequisite: MKT121

MKT231
CONTEMPORARY MARKETING ISSUES
2 Credit Hours 2 Contact Hours

This is a capstone course that focuses on significant current issues that relate to developing and carrying out effective marketing plans and strategies. Methodology includes seminar sessions current readings and individual research and presentation. Upon completion, students should be able to demonstrate an understanding of current issues relating to marketing plans and strategies.

Prerequisite: MKT121

MKT232
INTERNET MARKETING
2 Credit Hours 3 Contact Hours

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 real time, 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.

Prerequisite: MKT121

Course Descriptions Engineering Technology

"Contact hours" may involve lecture, laboratory and/or other instructor-directed activities.

Applied Industrial Technology

AIT121
MACHINE TOOLS I
3 Credit Hours 4 Contact Hours

The machine tool trades are presented. Topics include an in-depth coverage of safety; exposure to parts processing, including the appropriate shop math concepts; basic metrology, including English to metric conversion; metal stamping; mold processing and surface grinding.

AIT122
MACHINE TOOLS II
3 Credit Hours 5 Contact Hours

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 III
4 Credit Hours 6 Contact Hours

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 (CNC) machines.

Prerequisite: IET123

AIT124
PRINCIPLES OF RIGGING
3 Credit Hours 4 Contact Hours

Study of safe rigging principles, practices and equipment. Topics of study include fiber/wire rope, block/tackle, lift/rigging chain, proof test, safe working load, design factor, sling geometry, fittings, and lifting/moving equipment.

Automotive Engineering Technology

AUT121
AUTOMOTIVE TECHNICAL SKILLS
2 Credit Hours 3 Contact Hours

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 manuals. 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 the repair procedures for basic automotive components and systems. Classroom learning will be reinforced by lab activities.

AUT122
AUTOMOTIVE SYSTEMS AND ENGINE TECHNOLOGY
4 Credit Hours 6 Contact Hours

This course will introduce the student to the technology and terminology used within 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 the combustion process, fuel systems and basic emission controls will be presented. Classroom learning will be reinforced by laboratory activities.

AUT123
ENGINE DIAGNOSIS AND MAJOR SERVICE
4 Credit Hours 6 Contact Hours

Students will study the procedures used for automobile engine and systems diagnosis and overhaul. During the diagnosis portion of this course, students will learn how to use specialized engine diagnostic test equipment. Covered also will be customer questioning techniques and information gathering procedures. During the laboratory portion of the course, students 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 Credit Hours 6 Contact Hours

This course is designed to give the student knowledge of 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 chassis alignment and braking systems servicing will be covered. Quality work methods used when diagnosing, adjusting and repairing these safety-related systems are stressed.
Prerequisite: AUT121

AUT125
AUTOMOTIVE ELECTRICAL AND ACCESSORY SYSTEMS
4 Credit Hours 6 Contact Hours

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 meters and electrical test instruments.
Prerequisite: AUT121

AUT126
AUTOMOTIVE HVAC SYSTEMS
2 Credit Hours 5 Contact Hours

Students will study the design characteristics and operating principles of automotive heating, ventilation and air conditioning systems. Topics include: heat transfer, heating and cooling cycles, air flow management and component identification. Systems operation and troubleshooting techniques are reinforced by laboratory exercises including the recovery and recycling operations required for R12 and R134a refrigerants.
Prerequisite: AUT121

AUT221
FUEL AND EMISSIONS MANAGEMENT SYSTEMS
3 Credit Hours 4 Contact Hours

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. Laboratory activities include overhaul and adjustment of carburetors, throttle body and port fuel injection systems, and emission control devices such as those utilized with EGR, AIR and EVAP systems.
Prerequisite: AUT121

AUT222
ENGINE SYSTEM PERFORMANCE DIAGNOSIS
3 Credit Hours 4 Contact Hours

By lecture and practical demonstration, 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 diagnostic equipment, four and five-gas analyzers and oscilloscopes will reinforce student learning.
Prerequisite: AUT121

AUT223
ADVANCED AUTOMOTIVE ELECTRONICS
3 Credit Hours 4 Contact Hours

This course provides an in-depth study of the complex electronic devices and systems used for fuel management, ignition timing, driveline and emission control. The operation of automotive microprocessors, sensors and actuators is presented in lecture and by practical demonstration. On-vehicle problem-solving exercises utilizing diagnostic charts and specialized diagnostic equipment are a major part of student laboratory activities.
Prerequisite: AUT123

AUT224
AUTOMOTIVE DIESEL SYSTEMS
2 Credit Hours 2 Contact Hours

Covered by lecture and demonstration is the theory of operation of automotive Diesel engines and auxiliary equipment such as injection pumps, glow plug control systems and Diesel emission control devices. Student learning is reinforced by laboratory exercises emphasizing the correct application of diagnostic procedures and servicing methods used with automotive Diesel systems.
Prerequisite: AUT121

AUT225
AUTOMOTIVE DRIVETRAIN 1
3 Credit Hours 4 Contact Hours
In this course, the student will learn the design characteristics and operation of clutches, manual transmission/transaxles, rear axle assemblies, four-wheel drive systems and traction assist devices. From lab assignments students will receive hands-on experience in the diagnosis, servicing and overhaul of these units.
Prerequisite: AUT121

AUT226
AUTOMOTIVE DRIVETRAIN 2
3 Credit Hours 4 Contact Hours
This course continues the study of automotive transmissions by introducing the student to systems that utilize hydraulic principles and fluid flow dynamics in the control of automatic transmission geartrains. Student knowledge of individual transmissions and subassemblies operation will be reinforced by hands-on laboratory activities which include dynamometer testing of rebuilt transmissions. The basic operation and diagnosis of electronically controlled transmissions will be introduced.
Corequisite: AUT225

AUT227
COMPUTERIZED VEHICLE CONTROLS
3 Credit Hours 4 Contact Hours
The emphasis in this course is placed upon problem-solving strategies utilized in the diagnosis of computerized vehicle control systems. Subjects covered by lecture and practical demonstration include data stream and trouble code analysis, advanced scanner and oscilloscope techniques and diagnosis of body computer control systems.
Prerequisite: AUT121

AUT228
AUTOMOTIVE SERVICE MANAGEMENT
2 Credit Hours 3 Contact Hours
The course provides an introduction to the theory and practice of an important mid-management position in the automotive service industry. To provide the basic knowledge and skills necessary for this position, topics include: customer-employee relations, scheduling and dispatching, legal and ethical responsibilities, consumer affairs, financial aspects and quality assurance programs. A field service component is incorporated in the coursework.
Prerequisites: PSY124, ENG101

AUT229
AUTOMOTIVE MAINTENANCE WELDING
2 Credit Hours 4 Contact Hours
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.
Prerequisite: AUT121

AUT230
TECHNICAL PROJECT
2 Credit Hours 3 Contact Hours
This is an independent study course in which the student will create an automotive-oriented project that utilizes skills learned in previous automotive engineering 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.

AUT233
AUTOMOTIVE DIAGNOSTIC APPLICATIONS
2 Credit Hours 3 Contact Hours
An advanced-level course that serves as a capstone for the automotive engineering technology program by providing 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.
Prerequisites: AUT221, AUT223

Civil Engineering Technology

CET121
BUILDING MATERIALS AND CONSTRUCTION
3 Credit Hours 4 Contact Hours
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 DRAFTING I
3 Credit Hours 5 Contact Hours
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.
Corequisite: CET121

CET123
ARCHITECTURAL DRAFTING II
3 Credit Hours 5 Contact Hours

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.

Prerequisites: CET121, CET122

CET124
HIGHWAY AND MAP DRAWING
2 Credit Hours 4 Contact Hours

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.

Prerequisite: MTH121

CET125
SOIL MECHANICS
3 Credit Hours 4 Contact Hours

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.

Prerequisite: MTH121
Corequisite: MET124

CET221
SURVEYING GRAPHICS
3 Credit Hours 5 Contact Hours

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.

Prerequisites: CET227, DET125

CET222
CONCRETE AND ASPHALT TESTING
3 Credit Hours 4 Contact Hours

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.

Prerequisites: MTH121, CET121

CET223
STRUCTURAL DESIGN I
3 Credit Hours 5 Contact Hours

This course introduces the student to the analysis of simple structures. Topics include the application of loads on structures, the study of indeterminate 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.

Prerequisite: MET124

CET224
STRUCTURAL DESIGN II
3 Credit Hours 5 Contact Hours

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.

Prerequisite: CET223

CET225
BUILDING SERVICE SYSTEMS
3 Credit Hours 5 Contact Hours

This course familiarizes the student with basic hydraulics, plumbing, HVAC and lighting design. Emphasis will be placed on the sizing of system elements to meet given criteria. The calculation of heat loss and gain in buildings will be utilized to establish HVAC design.

Prerequisites: CET121, MTH121

CET226
ESTIMATING
3 Credit Hours 5 Contact Hours

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.

Prerequisites: CET121, CET122, MTH121, ECA122, sophomore status

CET227
SURVEYING I
3 Credit Hours 5 Contact Hours

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.

Corequisite: MTH121

CET228
SURVEYING II
3 Credit Hours 5 Contact Hours

Course covers methods and procedures for establishing line and grade for construction and the stadia method of topographic surveying. 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.

Prerequisite: CET227

CET229
SURVEYING III
3 Credit Hours 5 Contact Hours

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 be introduced to digital levels and automatic data collection along with geodetic survey methods and state plane coordinate systems.

Prerequisites: CET228, ECA122

CET231
LEGAL PRINCIPLES OF SURVEYING
3 Credit Hours 3 Contact Hours

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 Credit Hours 5 Contact Hours

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 mobile home parks in accordance with zoning and subdivision regulations.

Prerequisites: CET122 or CET124, CET227

CET233
ARCHITECTURAL DESIGN
3 Credit Hours 5 Contact Hours

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.

Prerequisites: CET123, CET121

CET234
A/E CAD
2 Credit Hours 4 Contact Hours

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.

Prerequisites: CET121, CET122, DET125

CET235
PROJECT ADMINISTRATION
3 Credit Hours 3 Contact Hours

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.

Prerequisites: CET121, CET122, ECA122

CET236
GLOBAL POSITIONING SYSTEMS
3 Credit Hours 4 Contact Hours

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.

Prerequisite: CET227

Design Engineering Technology

DET121
ENGINEERING DRAWING
3 Credit Hours 5 Contact Hours

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.

Corequisite: MET121

DET122
DESCRIPTIVE GEOMETRY
3 Credit Hours 5 Contact Hours

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.

Prerequisites: MET121, DET121

DET123
TECHNICAL GRAPHICS
1 Credit Hour 3 Contact Hours

This course is divided into two eight-week sections. In the first section, students will learn about instruments, geometric constructions, technical lettering, orthographic projection, auxiliary views and sectional views. The second section covers basic components of the CAD system, overview of Windows, input methods for AutoCAD, drawing set-up, basic drawing commands, editing/manipulation commands, dimensioning and text.

DET124
WORKING DRAWINGS
3 Credit Hours 5 Contact Hours

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.

Prerequisites: DET121, MET121
Corequisite: DET125

DET125
BASIC AUTOCAD
3 Credit Hours 5 Contact Hours

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 window operations, input methods, drawing setup and display, editing, dimensioning, text, layers, hatching, blocks, and plotting.

Prerequisites: DET121, MET121 (for DET students)
CET122 or CET124 (for CET students)

DET126
INTERMEDIATE AUTOCAD
3 Credit Hours 4 Contact Hours

Building on concepts learned in Basic AutoCAD, this course begins with a review of the changes added in the last software update and then 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.

Prerequisite: DET125

DET130
BASIC UNIGRAPHICS
3 Credit Hours 4 Contact Hours

This course is an introduction to three-dimensional drawings using EDS-Unigraphics software. Course will focus on practical applications of design using the Unigraphics system to develop parametric solid model representations of parts and assemblies. Topics include: parametric modeling, expressions, assemblies, drafting, reference features, and explicit curve creation.

Prerequisite: DET125

DET131
BASIC PRO ENGINEER
3 Credit Hours 4 Contact Hours

An introduction to three-dimensional drawings using Parametric Technology Corporation - Pro Engineer software. Course will focus on practical applications of design to develop parametric solid model representations of parts and assemblies. Drafting techniques will also be covered. Prior experience with CAD is necessary for students entering this course.

Prerequisite: DET121

DET132
BASIC SOLIDWORKS
3 Credit Hours 4 Contact Hours

This course is designed to introduce the student to SolidWorks, a parametric feature-based solid modeling program. SolidWorks is used for the design of parts, assemblies and engineering drawings. The student will design actual mechanical components, and the areas of concentration include: basic program syntax, design intent, top down and bottom up design, and parametric relations. Many parts and assemblies will be developed. Engineering drawings will also be generated from the solid models.

Prerequisite: DET125

DET223
KINEMATICS
3 Credit Hours 5 Contact Hours

This course covers four types of motion and their effect on the design of various machine elements. Using a graphical approach, the course relates theory learned in the first year with practical machine design applications. A PC software program is used to analyze design problems.

Prerequisites: DET125, PHY121

DET224
MECHANICAL SYSTEMS
3 Credit Hours 5 Contact Hours

The course covers process piping terminology, symbolism and drawings. In the laboratory, students will learn about graphic representation of pressure vessels, piping systems and supports in plan and isometric form.

Prerequisites: DET124, DET125

DET226
GEOMETRIC DIMENSIONING AND TOLERANCING
2 Credit Hours 3 Contact Hours

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 topics of floating fasteners, fixed fasteners and virtual conditions will be considered in discussing position tolerance.

Prerequisite: DET124

DET230
ADVANCED AUTOCAD
3 Credit Hours 4 Contact Hours

An introduction to three-dimensional drawings using AutoCAD, including wireframe, surface and solid modeling, 3D viewing commands to view the object from different viewing directions and object analysis (to find volume, mass, etc.). Prior experience with AutoCAD in the 2D drawing environment is necessary for students entering this course.

Prerequisite: DET125

DET231
TOOL DESIGN
3 Credit Hours 5 Contact Hours

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.
Prerequisite: DET125

DET232
ADVANCED PRO ENGINEER
3 Credit Hours 4 Contact Hours

Three dimensional drawing using Pro Engineer advanced design features such as: top-down design: skeletons and layout models; advanced sketching, geometry, components, patterns, and surface options; creating and modifying models, dimensions, bill of materials and features; and plotting.
Prerequisite: DET131

DET233
ADVANCED UNIGRAPHICS
3 Credit Hours 4 Contact Hours

Study advanced methods of model design with emphasis on design intent and model modification associativity. Topics include parametric design intent and model modification associativity. Topics include parametric modeling, constraint-based modeling using sketcher, interpart expressions, assemblies, mating conditions, top-down and bottom-up modeling, and part families.
Prerequisite: DET130

DET234
ADVANCE SOLIDWORKS
3 Credit Hours 4 Contact Hours

This course is designed to build on the student's basic knowledge of Basic SolidWorks by introducing some of the more advanced features, commands and functions found in the software.
Prerequisite: DET132

Computer Science and Engineering Technology

ECA121
INTRODUCTION TO ENGINEERING COMPUTER APPLICATIONS
2 Credit Hours 3 Contact Hours

Focuses on those computer/PC concepts and skills needed to solve problems in an engineering technician environment. The course describes the components and peripherals of a computer/PC and how they function together. Principal topics are Windows operating systems, Internet applications, LANs and the Windows networking environment, Microsoft Office, Word, Powerpoint and WANs, the common network topologies, and a variety of software application packages used to solve engineering technology problems.

ECA122
ENGINEERING COMPUTER APPLICATIONS
2 Credit Hours 3 Contact Hours

Enhances the student's knowledge of MS-DOS and Windows operating systems and prepares the student to use engineering technology applications software packages to solve real-world problems. The course examines software design and programming fundamentals using the BASIC language.
Corequisite: ECA121

ECA123
ENGINEERING COMPUTER APPLICATION - FORTRAN
3 Credit Hours 4 Contact Hours

The basic skills and techniques required in Fortran 77 programming are presented, with emphasis on the use of the computer for problem-solving. Lab exercises are engineering-related problems utilizing scientific problem-solving techniques. Course surveys software application packages available for mathematical computations.

ECA124
ENGINEERING COMPUTER APPLICATIONS - PASCAL
3 Credit Hours 4 Contact Hours

Basic skills and techniques required for Pascal programming are presented, with emphasis on the use of the computer for problem-solving. The lab exercises are engineering-related problems utilizing scientific problem-solving techniques. Course includes a survey of available software packages used to analyze mathematical equations.

ECA127
SOFTWARE ENGINEERING PRINCIPLES
3 Credit Hours 4 Contact Hours

Concepts of structured programming, conditional and repetitive logic constructs, functions, arrays, pointers and strings are principal topics. This course presents the student with numerous hands-on programming exercises in a lab environment.

ECA128
INTERMEDIATE DESKTOP APPLICATIONS WITH VISUAL BASIC
3 Credit Hours 4 Contact Hours

Design, creation, testing, deployment, maintenance and support of software applications using Microsoft's Visual Basic language are illustrated through a collection of practical, hands-on lab exercises and lectures. Applications are limited to the desktop environment. Helps prepare students for specific MCSD certification test: Desktop Applications with Microsoft Visual Basic, Test Number 70-176.
Prerequisite: ECA127

ECA129
CRYPTOGRAPHY
3 Credit Hours 4 Contact Hours

Communication techniques over nonsecure channels are presented. Math-ematics and computer science concepts are used to design and program encryption/decryption systems. Kerchoff's Principle for modern cryto-graphy is stressed. Through a set of hands-on exercises, the student will become familiar with symmetic key and public key encryption/ decryption methods.

Prerequisite(s): MTH121, ECA127

ECA130
SOFTWARE VULNERABILITIES
3 Credit Hours 4 Contact Hours

Enumeration, exploits, keygens and other application vulnerabilites are presented. Security holes and exploitations in computer, inter- preted and web based applications are addressed in a hands-on enviro- ment.

Prerequisite(s): ECA127, EET131, EET141

ECA221
OPERATING SYSTEMS FOR SOFTWARE DEVELOPERS
3 Credit Hours 4 Contact Hours

Presents programming concepts for various operating systems to include memory models, disk access methods, multi-tasking methods and network programming options while giving the student a working knowledge of operating systems. The primary focus is on Windows and UNIX operating systems using a variety of object-oriented programming development tools.

Prerequisites: ECA122,ECA222

ECA222
INTRODUCTION TO C++ PROGRAMMING
3 Credit Hours 4 Contact Hours

Focuses on computer concepts, control structures, functions, arrays, pointers and strings found in C++. 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.

Prerequisite: ECA127

ECA223
JAVA PROGRAMMING IN COMPUTER SCIENCE
3 Credit Hours 4 Contact Hours

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 webpages.

Prerequisite: ECA127

ECA224
SOFTWARE ENGINEERING DESIGN AND DEVELOPMENT WITH COM
3 Credit Hours 4 Contact Hours

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.

Prerequisite: ECA222

ECA225
APPLIED INTERACTIVE SOFTWARE
3 Credit Hours 4 Contact Hours

Competencies required to implement active design, function and applications to static Websites are covered. At the end of the course the student will be able to: 1) Create, edit and hide frames; 2) Develop and administer online forms, data resources and catalogs; 3) Implement JavaScript; 4) Use DHTML; 5) Describe XML.

Prerequisite: ECA228

ECA226
SOFTWARE ENGINEERING WITH VISUAL C++
3 Credit Hours 4 Contact Hours

A Windows programming course using object-oriented design and programming methods. The student will learn how to interface with the Microsoft development environment to design and develop Windows-based programs utilizing the Microsoft Foundation Classes. Topics include WIN-32 API, App Wizard and application development. A collection of hands-on labs help to develop proper software engineering skills in a technical setting.

Prerequisite: ECA222

ECA227
ASSEMBLY LANGUAGE
3 Credit Hours 4 Contact Hours

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.

Prerequisites: ECA222, ECA223

ECA228
INTERNET/INTRANET SOFTWARE DESIGN APPLICATIONS I
2 Credit Hours 3 Contact Hours

Upon completion of this course, the student will be able to implement a Web Server using a variety of software packages and tools. The course presents construction details for intra-company intranets.

ECA229
INTERNET/INTRANET SOFTWARE DESIGN APPLICATIONS II
3 Credit Hours 4 Contact Hours

An advanced design course following the first, this course delves deeper into the area of application-based client side page design using Microsoft Front Page and Active Server Pages (ASP).

Prerequisite: ECA228

ECA230
DATABASE DESIGN/INTERFACE
3 Credit Hours 4 Contact Hours

A user-oriented design methodology for the design and management of large collections of data. Students will complete hands-on labs and projects to create, maintain and retrieve data from SQL Server and access databases using Java applications and Java Servlets.

Prerequisites: ECA222, ECA223

ECA231
DATA ACQUISITION/ANALYSIS
3 Credit Hours 4 Contact Hours

Techniques used to interface with machinery, transducers, LEDs, and switches to gather data in real-time settings. Methods of analyzing and reporting captured data are described.

Prerequisites: ECA222,ECA223

ECA232
DESIGN AND DEVELOPMENT FOR E-COMMERCE SITES
3 Credit Hours 4 Contact Hours

The fundamental infrastructure of electronic commerce is presented. Software and hardware components, utilizing a variety of software tools and techniques, are described. Interactive commercial transactions are discussed. Cold Fusion, XML and Java Servlets are used to create e-commerce sites.

Prerequisites: ECA225,ECA223

ECA233
ANALYZING SOFTWARE REQUIREMENTS AND DEVELOPING SOLUTIONS
3 Credit Hours 4 Contact Hours

Presents methods used to design real-world, business-driven software solutions. Topics examined include: the complete software life cycle including proposal, requirements document and test plan. Case studies review practical problems from analysis of requirements through completion of solutions. This course helps prepare students for Microsoft MCSD certification exam 70-100.

Prerequisites: ECA222,ECA223

ECA234
CFML TOOLS AND DESIGN
3 Credit Hours 4 Contact Hours

This course features the techniques necessary to implement a secure cold fusion sever for data mining and e-solutions architecture. Client side CFML programming will be covered from both the data drill-down method and the flat structure method of development.

Prerequisite: ECA229

ECA235
XML DATA DESIGN
3 Credit Hours 4 Contact Hours

This course focuses on XML technology as it is related to today's e-business solutions. XML data design first covers the core material, including well-formed syntax, data modeling, and the Document Object Model (DOM) - a critical programming interface to XML documents. Additionally, the student will gain an understanding of XML as a data format and transport mechanism, as well as a visual presentation language for human interaction.

Prerequisite: ECA229

ECA236
INTERNET/INTRANET SOFTWARE DESIGN III
3 Credit Hours 4 Contact Hours

This course is a continuation of the ECA 229 ASP programming, focusing on the server-side programming. This course will enhance understanding of ASP development as related to Active X Data Objects (ADO), building components for ASP, integration with BackOffice, and security/performance/scalability. A student completing this course should be able to build a fast/secure e-commerce Website utilizing ASP technology.

Prerequisite: ECA229

ECA237
WEB SERVER PROGRAMMING WITH C++
3 Credit Hours 4 Contact Hours

This course offers an approach to server-side programming for Internet/intranet development. The student will gain a key understanding of the newest technologies offered from Microsoft to design and develop solutions for e-business. The focus will be on ISAPI and other programming methods, building on C++ programming abilities.

Prerequisite: ECA222

ECA238
DISTRIBUTED APPLICATIONS WITH VISUAL BASIC
3 Credit Hours 4 Contact Hours

Design, creation, testing, deployment, maintenance and support of software applications using Microsoft's Visual Basic language are illustrated through a collection of practical, hands-on lab exercises and lectures. Applications focus on the client-server, distributed environment. Helps prepare students for specific MCSD certification test: Designing and Implementing Distributed Applications with Microsoft Visual Basic, Test Number 70-175.

Prerequisite: ECA127

ECA239
ADVANCED JAVA PROGRAMMING FOR SOFTWARE ENGINEERING APPLICATIONS
3 Credit Hours 4 Contact Hours

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.
Prerequisite: ECA223

Electrical and Electronic Engineering Technology

EET120
DC CIRCUIT ANALYSIS
4 Credit Hours 5 Contact Hours
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, sine wave characteristics.
Corequisite: MTH121

EET121
SURVEY
1 Credit Hour 1 Contact Hour
To familiarize the electrical and electronic technology student with specific requirements of this program at Stark State, with the role of technicians in industry and their relationship with other members of the engineering team. The course also includes sessions on electrical safety procedures in industry and some OSHA requirements.

EET122
AC CIRCUIT ANALYSIS
4 Credit Hours 5 Contact Hours
Alternating current (AC) circuit analysis and instrumentation. Topic include: phasor analysis, network theorems, power, resonance, pulse analysis, transformers, instrumentation.
Prerequisite: EET120
Corequisite: MTH122

EET123
ELECTRONIC DEVICES AND CIRCUITS
3 Credit Hours 4 Contact Hours
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.
Prerequisite: EET120
Corequisite: EET122 or EST131

EET125
CIRCUITS MANUFACTURING TECHNIQUES
1 Credit Hour 2 Contact Hours
Safety in the shop. Electrical and mechanical shop practice including use of hand tools, soldering techniques, solderless terminations, wire preparations, wiring techniques and parts ordering.
Prerequisite: EET120

EET126
ELECTRICAL MACHINES I
3 Credit Hours 4 Contact Hours
Principles of electromagnetic induction, dynamo construction, DC generation characteristics and operation, armature reaction, DC motor characteristics, operation and control, machine efficiency and single phase transformer theory and operation.
Prerequisite: EET120
Corequisites: PHY121

EET127
ELECTRICAL MACHINES II
4 Credit Hours 5 Contact Hours
Theory of operation, characteristics and construction of three-phase transformers, AC motors and AC generators. Subjects include polyphase transformers, induction motors, alternators, synchronous motors, and single-phase induction, universal and specialty motors.
Prerequisite: EET126

EET128
NATIONAL ELECTRIC CODE AND ELECTRICAL SYSTEM DESIGN
2 Credit Hours 3 Contact Hours
National Electric Code requirements for design and installation of electrical service and equipment in commercial and industrial buildings. Subjects include electrical systems for power, light and heat; load and fault calculations; and breaker and fuse selection. Lighting and heating design calculations are introduced.
Prerequisite: EET122

EET129
OPTICS
2 Credit Hours 3 Contact Hours
The nature of light and geometrical optics. Topics include: physics of light, lenses, lasers, optoelectronics and fiber optics.
Corequisite: PHY121

EET131
PC UPGRADING AND MAINTENANCE
3 Credit Hours 4 Contact Hours
Personal computer repair, troubleshooting, upgrading and maintenance System configuration under DOS, Win 3.X, Win 9X, and Win NT. Hardware topics include: system board, microprocessors, busses, memory, disk drives and power supplies.
Prerequisite: ECA121

EET132
MS WINDOWS NT

3 Credit Hours 5 Contact Hours

This course is composed of material from Microsoft "Administration of Microsoft Windows NT" and "Supporting Microsoft Windows Core Technologies." Includes information on both Windows NT Workstation and NT Server and requirements for both hardware and software setup. Prepares students for specific Microsoft MCSE certification tests.

Prerequisite: ECA141

EET141
INTRODUCTION TO COMPUTER NETWORKING
2 Credit Hours 3 Contact Hours

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.

Prerequisite: ECA121

EET221
PULSE LOGIC AND SWITCHING
3 Credit Hours 4 Contact Hours

A study of pulse circuits, including diode and transistor switches; discrete and integrated circuit (IC) logic gates and multivibrators; TTL and MOS IC families; and IC interfacing.

Prerequisite: EET123

EET222
DIGITAL INTEGRATED CIRCUITS
3 Credit Hours 4 Contact Hours

A study of TTL and CMOS integrated circuits, including counters, registers, encoders, decoders, multiplexers, demultiplexers, arithmetic circuits, ADC and DAC circuits. The use of hardware minimization techniques is also included.

Corequisite: EET221

EET223
MICROPROGRAMMING
1 Credit Hour 2 Contact Hours

System architecture, programming procedures, flow charts, machine language and instruction sets, assembly language and software development.

Prerequisite: ECA122
Corequisite: EET221

EET224
MICROPROCESSORS
2 Credit Hours 3 Contact Hours

Memory organization, addressing, I/O devices and interfaces, support hardware, system integration, port handshake functions, interrupt techniques and control applications.

Prerequisite: EET223
Corequisite: EET222

EET225
DIGITAL COMMUNICATION AND SYSTEM ANALYSIS
3 Credit Hours 6 Contact Hours

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).

Prerequisites: EET224 or EET248
Corequisite: EET222

EET226
TRANSMISSION AND DISTRIBUTION
3 Credit Hours 4 Contact Hours

An introduction to power systems, including basic transmission and distribution circuits; per unit quantities; line impedance and fault calculations; interrupting devices; grounding; instruments; relays; and coordination of protective devices.

Prerequisite: EET122
Corequisite: EET127

EET227
INDUSTRIAL CONTROLS I
3 Credit Hours 4 Contact Hours

A presentation of basic 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.

Prerequisite: EET120
Corequisites: EET126 or EST223

EET228
INDUSTRIAL CONTROLS II
3 Credit Hours 4 Contact Hours

Basic techniques, applications and analysis of static control devices. Application and analysis of microprocessor-based computer systems and programmable controllers to industrial control systems. Introduction to closed systems control (PID control) and robot control.

Prerequisites: EET227, ECA122, EET131

EET229
ELECTRICAL DRAFTING
1 Credit Hour 3 Contact Hours

Electrical drawing and presentation techniques, including graphing; electrical standard symbols; logic diagrams; wiring diagrams; one-line drawing; schematic diagrams; industrial control diagrams; and commercial receptacle, lighting and power distribution drawings. Both drawing boards and computers are used for drawing development.

Prerequisites: DET123, EET227

EET230
ELECTRONIC CIRCUITS I
3 Credit Hours 4 Contact Hours

A study of field effect transistors, h-parameters, device equivalent circuits, small signal analysis, multistage amplification, decibels, frequency response and large signal amplifiers.
Prerequisite: EET123

EET231
ELECTRONIC CIRCUITS II
3 Credit Hours 4 Contact Hours
A study of power amplifier design, heat sinking, differential amplifiers, operational amplifiers, IC fundamentals, feedback and oscillator circuits.
Prerequisite: EET230

EET232
INDUSTRIAL ELECTRONICS
3 Credit Hours 4 Contact Hours
A study of polyphase rectifier circuits, voltage regulators, phase control circuits, photoelectric control and solid-state motor control circuits.
Prerequisites: ECA122, EET227 or EST128

EET233
TECHNICAL PROJECT ELECTRICAL
1 Credit Hour 3 Contact Hours
A course designed to allow the student to demonstrate capabilities acquired during previous coursework 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.

EET234
ELECTRONIC DRAFTING
1 Credit Hour 3 Contact Hours
Electronic drawing and presentation techniques, including: graphing and electronic standard symbols, production drawings, wiring diagrams, printed-circuit design and documentation, and industrial control drawings. Both drawing boards and computers are used for drawing development.
Prerequisite: DET123
Corequisite: EET123

EET235
TECHNICAL PROJECT ELECTRONIC
1 Credit Hour 2 Contact Hours
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.

EET242
MS SQL SERVER
3 Credit Hours 5 Contact Hours
Advanced topics of Windows NT, including using Windows NT in the "Back Office" environment and SQL Server. It examines aspects of network information server administration, standard Internet protocols, and on the configuration and administration of server software used to provide intranet services. Prepares students for specific Microsoft MCSE certification tests.
Prerequisites: EET132 or EET252

EET244
ELECTRONIC TELECOMMUNICATIONS
3 Credit Hours 4 Contact Hours
A course dealing with telecommunications hardware and software. Both wired and wireless topics are covered, along with the software used to implement such systems.
Corequisite: EET221

EET245
TECHNICAL PROJECT - ELECTRONIC TELECOMMUNICATIONS
3 Credit Hours 5 Contact Hours
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
TECHNICAL PROJECT - COMPUTER NETWORKING
3 Credit Hours 5 Contact Hours
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.

EET247
PERSONAL COMPUTER OPERATING SYSTEMS
1 Credit Hour 2 Contact Hours
A study of current operating systems and architecture of personal computers. This course includes an example of Graphical User Interface (GUI) software and the organization of operating systems to support loading engineering technology applications.
Prerequisite: ECA122
Corequisite: EET221

EET248
WORK STATION INTERFACING
2 Credit Hours 3 Contact Hours
Study of current operating systems for port management and personal computer bus architecture. The course includes digital and analog interfacing using serial and parallel ports.
Prerequisite: ECA122
Corequisites: EET131, EET222

EET249
MS WINDOWS NT SERVER AND MICROSOFT TCP/IP
3 Credit Hours 5 Contact Hours

This course covers the knowledge and skills necessary to plan, analyze, optimize and troubleshoot Microsoft Windows NT Server network operating system in an enterprise environment, including how to setup, configure, use and support Transmission Control Protocol/Internet Protocol (TCP/IP). The material presented is needed for the MCSE core exam of "Supporting Microsoft Windows NT Enterprises Technologies" and the elective exam of "Internet-Working with TCP/IP on Microsoft Windows NT."
Prerequisite: EET132

EET250
UNIX SYSTEM ADMINISTRATION
3 Credit Hours 4 Contact Hours
This course will cover administration and maintenance of a Linux server. Topics include: adding users, backups and restore, installation, X Windows configuration, network configuration and shell scripts. The course will prepare the student for Level 1 Linus certification.
Prerequisite: EET257

EET251
UNIX NETWORK ADMINISTRATION
3 Credit Hours 4 Contact Hours
This course will cover administration of a Linux network server. Topics include: LAN servers (NFS, NIS, SAMBA), configuring an Internet gateway (firewall, e-mail, news), setting up an Internet server (WWW, telnet, ftp).
Prerequisite: EET250

EET252
MICORSOFT WINDOWS 2000 PROFESSIONAL, SERVER AND NETWORKING
3 Credit Hours 5 Contact Hours
Course addresses administration, security, networking, TCP/IP installation and configuration of Windows 2000 Professional, installation and configuring of Server to create file, print and Web servers. Also, includes installing, configuration, managing and supporting a Network Infrastructure for the WIN2000 server family of products. Equivalent to Microsoft courses 2152 and 2153.
Prerequisites: ECA125, EET131

EET253
IMPLEMENTING AND ADMINISTERING MICROSOFT WINDOWS 2000 DIRECTORY SERVICES
2 Credit Hours 3 Contact Hours
Course addresses the logical and physical structure of Active Directory, configuring Domain Name System for Active Directory, administering user accounts and group resources. Equivalent to Microsoft course 2154.
Prerequisite: EET252

EET254
DESIGNING AN MS WINDOWS 2000 DIRECTORY SERVICES INFRASTRUCTURE
2 Credit Hours 3 Contact Hours
Course includes designing a Microsoft Windows 2000 network infrastructure, identifying the information technology needs of an organization, and designing the Active Directory structure. Also includes designing Schema Policy, Support Group Policy, Active Directory Domain, and Multiple Domain Structure. Equivalent to Microsoft course 1561.
Corequisite: EET253

EET255
DESIGNING AN MS WINDOWS 2000 NETWORK SERVICES INFRASTRUCTURE
2 Credit Hours 3 Contact Hours
Course includes design of Microsoft Windows 2000 network services infrastructure to support network application needs of an organization. Additional topics include designing Internet/Extranet Connectivity, Network Services Infrastructure and network design for support of applications. Equivalent to Microsoft course 1562.
Prerequisite: EET253

EET256
DESIGNING A SECURE MICROSOFT WINDOWS 2000 NETWORK
2 Credit Hours 3 Contact Hours
Course includes design of security framework for small, medium, and enterprise networks using Microsoft Windows 2000 technologies, design for providing secure access to local network users, remote users, remote offices, and private and public networks. Equivalent to Microsoft course 2150.
Prerequisite: EET253

EET257
UNIX OPERATING ENVIRONMENT
3 Credit Hours 4 Contact Hours
Introduction to the UNIX operating environment examines the configuration and management of computer users, resources and files. The course explores the use of text and visual editors, messaging capabilities, shells, help facilities, file leakages, disk storage techniques, text searches, the configuration of queues and other related topics testing the UNIX operating system.
Prerequisite: ECA121

EET258
DATA ENCRYPTION AND FIREWALL TECHNOLOGY
3 Credit Hours 4 Contact Hours
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.
Prerequisite: EET252

EET259
WEB SERVER ADMINISTRATION
3 Credit Hours 4 Contact Hours

This course provides the essentials for designing, configuring and implementing Web Servers. The focus will be on the Apache Web Server, IIS and other related Web Server technology.

Prerequisites: EET252, EET257

EET260
COMPUTER FORENSICS
3 Credit Hours 4 Contact Hours

Computer crime, programming in the network monitoring platform, trap and trace techniques and patch level enumeration will be the focus of this course. Detailed descriptions and technology related to responseteam are presented.

Prerequisite(s): ECA127, EET131

EET261
ADVANCED SECURITY TECHNIQUES
3 Credit Hours 5 Contact Hours

Session hijacking, trojans, virii, input validation and other types ofattacks are covered in this class. Ghost Mail, NetCat and war dialerswill be used as tools to provide counter measures against the computercriminal.

Prerequisite(s): EET131, EET141, ECA129, ECA130

Environmental Technology

ENV101
ENVIRONMENTAL STUDIES SEMINAR
1 Credit Hour 3 Contact Hours

This is an introductory course in the area of environmental studies and includes guest lecturers and field trips to waste and industrial sites.

ENV121
REGULATIONS/COMPLIANCE I
3 Credit Hours 3 Contact Hours

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.

ENV221
OSHA 40-HOUR HAZWOPER
2 Credit Hours 3 Contact Hours

This course satisfies the requirements of OSH 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, respiratory protection, protective clothing, site decontamination and response to incidents. Certificate is awarded upon completion of this course.

ENV222
ENVIRONMENTAL SYSTEMS
3 Credit Hours 4 Contact Hours

This course will introduce the students to environmental control systems and practical applications of their operation and maintenance. Particular attention will be 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 will also be covered.

Prerequisites: CHM121, MTH121

ENV223
BASIC GEOLOGY/HYDROLOGY
3 Credit Hours 4 Contact Hours

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.

Prerequisite: MTH121

ENV224
AIR SAMPLING, ANALYSIS AND CONTROL
3 Credit Hours 4 Contact Hours

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.

Prerequisites: CHM121, MTH222

ENV225
SOLID AND HAZARDOUS WASTE SAMPLING, ANALYSIS AND MANAGEMENT
3 Credit Hours 5 Contact Hours

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.

Prerequisites: ENV121, ENV221, CHM122, MTH222

ENV226
WATER SAMPLING, ANALYSIS AND CONTROL
3 Credit Hours 4 Contact Hours

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.

Prerequisites: ENV223, CHM122, MTH222

ENV227
LABORATORY INSTRUMENTATION
3 Credit Hours 4 Contact Hours
Standard methods of chemical and instrumental analysis will be covered in this course. Special emphasis on environmental applications will be considered as the student develops skills in the use of equipment such as the atomic absorption spectrophotometer and gas chromatograph. Proper recording of data and reporting techniques will also be stressed.
Prerequisites: MTH222, CHM121

ENV228
HEALTH AND SAFETY
3 Credit Hours 4 Contact Hours
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.
Prerequisite: ENV121

ENV229
REGULATIONS/COMPLIANCE II
3 Credit Hours 4 Contact Hours
In a continuation of Regulations Compliance I, the student will use the Federal Register, the Code of Federal Regulation and independent research in determining what laws affect various situations and how to be in compliance with those regulations. Case studies will be used to conduct a compliance audit, to apply for operating permits, to prepare routine reports and to undergo a compliance inspection.
Prerequisite: ENV121

ENV230
OSHA 8-HOUR REFRESHER
1 Credit Hour 1 Contact Hour
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.
Prerequisite: ENV221

ENV236
TECHNICAL PROJECT (COMPUTER ENVIRONMENTAL APPLICATIONS)
2 Credit Hours 4 Contact Hours
This course is designed to allow the student to exercise the capabilities developed in other courses within the environmental areas. Students will choose approved projects compatible with their interest and background. An environmental problem will be studied and all regulations that affect the problem will be researched and a plan of action for compliance and/or remediation will be developed.
Prerequisites: ENV121, ENV222, ECA 122, sophomore status

Electrical Maintenance Technology

EST128
DIGITAL ELECTRONICS
3 Credit Hours 4 Contact Hours
Course covers pulse characteristics, number systems TTL and CMOS, IC logic families, interfacing, logic circuits, Boolean algebra, logic simplification, clock and trigger circuits, flip-flops, registers, counters, encoders and decoders, parity circuits, multiplexers and demultiplexers, and displays.
Prerequisite: EET120
Corequisites: EET123

EST129
SWITCHGEAR, TRANSFORMERS AND CONTROL
2 Credit Hours 3 Contact Hours
Course covers (<4KV) and high (15KV) voltage switchgear construction, use and maintenance; single and three-phase transformer basics and maintenance; control circuit schematic (ladder) and wiring diagrams, and control circuit wiring and troubleshooting.
Corequisite: EET120

EST130
ELECTRICAL CIRCUITS AND DEVICES
4 Credit Hours 5 Contact Hours
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.
Prerequisite: MTH101

EST131
AC FUNDAMENTALS
4 Credit Hours 5 Contact Hours
Alternating current (AC) Circuit Analysis. Topics include: inductance, capacitance, series and parallel circuits, AC instruments, three-phase systems and transformers.

Prerequisite: EET120

EST221
ELECTRONIC TROUBLESHOOTING
3 Credit Hours 4 Contact Hours

Course covers generic troubleshooting procedures, including: electronic problems, system troubleshooting, live-circuit testing, DC troubleshooting, power supply repair, signal tracing, semiconductor in-circuit testing, testing live analog circuits, RF circuit troubleshooting, pulse circuit troubleshooting, digital test techniques, troubleshooting computer circuits, dead circuit testing, replacing failed components, preventive maintenance, and power and motor circuit troubleshooting.

Prerequisites: EST128, EST131

EST222
FUNDAMENTALS OF MICROPROCESSORS
4 Credit Hours 6 Contact Hours

Course presents the practical knowledge of microprocessor hardware an basic understanding of the software used to control a microprocessor system. This information is used to troubleshoot computer systems. An introduction to programmable logic controllers is also included.

Prerequisites: EST128, ECA122

EST223
ELECTRICAL MACHINES
3 Credit Hours 4 Contact Hours

Course covers basic theory of DC generators and motors first, then proceeds with laboratory experiments to clarify the theory. Students will study AC theory and conduct experiments with single and three-phase transformers and AC machines.

Prerequisite: EET120

EST224
DIGITAL COMMUNICATIONS
3 Credit Hours 4 Contact Hours

A study of communication circuits. Emphasis is on digital circuits and interfacing with various digital circuits. Included are local area networks, RS-232, ASCII terminals, digital modulation and demodulation, and an introduction to fiber optics.

Prerequisite: EST222

Special Courses in Engineering Technology Division

ETD201
ENGINEERING TECHNOLOGY DIVISION INDEPENDENT STUDY
1 Credit Hour 10 Contact Hours

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
ENGINEERING TECHNOLOGY DIVISION INDEPENDENT STUDY
2 Credit Hours 20 Contact Hours

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.

ETD203
ENGINEERING TECHNOLOGY DIVISION INDEPENDENT STUDY
3 Credit Hours 30 Contact Hours

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
ENGINEERING TECHNOLOGY DIVISION INDEPENDENT STUDY
4 Credit Hours 40 Contact Hours

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 TECHNOLOGY CO-OP
2 Credit Hours 20 Contact Hours

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 TECHNOLOGY CO-OP
3 Credit Hours 30 Contact Hours

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 TECHNOLOGY CO-OP
4 Credit Hours 40 Contact Hours

Co-op opportunities are available to students enrolled in engineering technologies. Students may contact their faculty advisors or career services for more information.

Electric Power Utility Technology

These courses are limited to those enrolled in the electric power utility program.

EUT121
OVERHEAD LINE TECHNOLOGY I
6 Credit Hours 10 Contact Hours

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 Credit Hours 10 Contact Hours

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.
Prerequisite: EUT121

EUT221
OVERHEAD LINE TECHNOLOGY III
6 Credit Hours 10 Contact Hours

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 and 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.
Prerequisite: EUT122

EUT222
OVERHEAD LINE TECHNICAL IV
7 Credit Hours 12 Contact Hours

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. Include in this course of instruction are: Lockout/Tagout, Master Drive, Topical Safety, Comprehensive Skills Review and a Safety Fair.
Prerequisite: EUT221

EUT223
ELECTRIC POWER TRANSMISSION AND DISTRIBUTION
3 Credit Hours 2 Contact Hours

The course encompasses power transmission and distribution systems, components and analysis. Field trips to appropriate sites are utilized to fulfill systems, components and analysis. Field trips to appropriate sites are utilized to fulfill the laboratory requirements.
Prerequisites: EST131, EST129

Heating, Ventilation and Air Conditioning Technology

HVC121
HVAC PRINCIPLES I
3 Credit Hours 4 Contact Hours

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.
Prerequisite: MTH101

HVC122
HVAC PRINCIPLES II
3 Credit Hours 4 Contact Hours

Calculation of residential and commercial heating and cooling loads, ventilation, exhaust, internal loads, infiltration, HVAC equipment capacities, ratings and performance data. Fans, fan laws and performance data.

Pump and motor ratings and performance. The effect of equipment rated performance on the delivery system. Introduction to Ohio Basic Mechanical Code (OBMC).
Prerequisite: HVC121

HVC123
SHEET METAL LAYOUT I
3 Credit Hours 4 Contact Hours
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.

HVC221
HVAC FURNACE COMBUSTION PRINCIPLES
2 Credit Hours 2 Contact Hours
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 AND APPLICATION
3 Credit Hours 4 Contact Hours
Fundamental design of the residential and light commercial HVAC system. Application of competencies gained in HVAC Principles I and HVAC Principles II. Information gathering and decision-making process to set design criteria and develop the HVAC system. Equipment, accessory and control selection and application. Preparation of basic HVAC drawings, drawing standards and symbols. Specification and sequence of operation reading and writing. Design problem-solving. Code-driven design considerations.
Prerequisite: HVC122

HVC223
HVAC SYSTEM OPERATING AND TROUBLESHOOT I
3 Credit Hours 4 Contact Hours
Equipment and system operation and problem solving. Through the use of laboratory demonstrations, measurements, observations and experiments with HVAC systems and components the new and experienced technician will be given experiential points of reference for system problem diagnosis.
Prerequisites: HVC122, EST130

HVC224
HVAC SYSTEM OPERATING AND TROUBLESHOOT II
3 Credit Hours 4 Contact Hours
A continuation of the classroom experience of HVAC System Operation and Troubleshooting I. This class moved into the subject of commercial equipment and systems including package equipment, zoned systems, economizers, ventilation and exhaust systems. Troubleshooting instruction will be oriented to ventilation and system sequence of operation and system performance expectations.
Prerequisite: HVC223

HVC225
CONSTRUCTION SITE SAFETY
1 Credit Hour 1 Contact Hour
This course of study examines safety issues relating to the construction job site and construction company shop. The subjects covered will include, but not be limited to, the company safety policy and program, equipment safety, ladder and scaffolding safety, safety rails, equipment safety, job planning, job site and shop prevention and reporting procedures. Company and personal responsibility relating to accident prevention and occurrence will be a part of the coursework.

HVC226
SHEET METAL LAYOUT II
3 Credit Hours 4 Contact Hours
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.
Prerequisite: HVC123

HVC227
HVAC FIELD INSTALLATION TECHNIQUES AND PROCEDURES
4 Credit Hours 5 Contact Hours
Laboratory intensive introduction to air conditioning system field installation techniques and procedures.

HVC228
HVAC SYSTEM AIRFLOW AND DUCT SIZING
1 Credit Hour 2 Contact Hours
A detailed examination of HVAC system airflow principles, duct sizing procedures and existing system problem solving. Class grade will be based on the successful completion of a properly sized duct system given equipment performance data.

HVC229
AIR CONDITIONING REFRIGERATION CYCLE
1 Credit Hour 2 Contact Hours
Intensive study of the refrigeration cycle as it applies to space conditioning equipment. Equipment covered will include residential split system air conditioners and heat pumps, their principles of operation, components, auxiliary devices and performance ratings.
Prerequisite: MTH101

HVC230
HVAC RESIDENTIAL EQUIPMENT SIZING
1 Credit Hour 2 Contact Hours

An in-depth investigation into residential structural heat loss - heat gain and subsequent equipment selection. Calculations will be performed utilizing ACCA Manual J and longhand forms. Class grade will be based on the successful completion of a heating and cooling load calculation and equipment selection for a typical present day residence.

Prerequisite: MTH101

HVC231
HVAC SYSTEM INFORMATION GATHERING, RECORDING AND COMMUNICATION
1 Credit Hour 2 Contact Hours

This course of study will instruct the technician or the project manager on performance data gathering and recording. The expectations of the customer will be addressed in the context of the organization and delivery of the information. The immediate and historical importance of performance information, as it applies to equipment system problem solving, will be discussed as a part of this course.

Prerequisites: HVC121,HVC229

HVC232
ADVANCED HVAC APPLICATIONS
3 Credit Hours 4 Contact Hours

HVAC equipment application techniques concentrating on commercial and light industrial space conditioning, ventilation including make-up air systems, exhaust including commercial kitchen hoods and vapor removal systems. Design in this area is heavily code driven. Related codes will be covered extensively.

Prerequisite: HVC222

HVC233
HVAC BID SPECIFICATION
3 Credit Hours 4 Contact Hours

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.

Prerequisite: HVC222

Industrial Engineering Technology

IET121
INDUSTRIAL MANAGEMENT CONCEPTS
3 Credit Hours 3 Contact Hours

An introductory course that highlights the essential elements of contemporary management in the industrial organization. Topics include, but are not limited to: the development of contemporary management and organization; the decision-making process; line and staff regulations; managerial authority and responsibility; planning; individual and group behavior; communication; and leadership styles.

Prerequisite: IET125

IET125
INTRODUCTION TO QUALITY
2 Credit Hours 2 Contact Hours

An overview of the quality function including a discussion of the philosophy of defect prevention, quality costs, quality planning and vendor relations.

IET221
WORK MEASUREMENT
2 Credit Hours 3 Contact Hours

Course covers the tools used by analysts in industry to lower product cost. Includes operation analysis, charting techniques, time study, predetermined standard times, computer work measurement techniques, wage payment systems and training requirements.

Prerequisites: IET125, MTH222, MTH121

IET222
STATISTICAL QUALITY CONTROL
3 Credit Hours 3 Contact Hours

A study of statistical techniques used in industry to improve and monitor product quality. The theory and application of variable control charts (X bar and R), attribute charts (np, p, c, u), and lot by lot acceptance sampling techniques are covered in detail. Theory and the application of each technique will be discussed.

Prerequisites: IET 125, MTH 222

IET223
COMPUTER NUMERICAL CONTROL
4 Credit Hours 6 Contact Hours

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.

Prerequisite: AIT122

IET224
PRODUCTION PLANNING AND INVENTORY CONTROL
2 Credit Hours 3 Contact Hours

This course provides an overview of production planning and inventory control techniques. Topics include: Linear Regression, Exponential Smoothing and Seasonal Base Index Forecasting; Statistical Inventory Replacement Models including EOQ theory, MRP, MRPII, Finite Capacity Loading and Shop Floor Feedback and Control; JIT, Kanban, and Time-based Synchronized Manufacturing.

Prerequisites: IET125, MTH222

IET225
INSTRUMENTATION/PROCESS CONTROL
2 Credit Hours 3 Contact Hours
Course designed to provide the technician with the knowledge of the basic principles of instrumentation. It is primarily descriptive, but requires a basic knowledge of physics, including mechanics, elements of electricity and basic mathematics.

IET226
PLANT LAYOUT
3 Credit Hours 4 Contact Hours
The study of facilities planning and analysis including equipment capacity studies, concepts and techniques of layout preparation, definition of plant functions and evaluation, selection, and implementation of the plan.
Prerequisite: IET125

IET227
INTRODUCTION TO COORDINATE, MEASUREMENT AND MACHINE
1 Credit Hour 2 Contact Hours
This course will familiarize students with the basic function, capabilities and use of the coordinate measurement machine. Students will become familiar with the computer interface, and will be introduced to a user-friendly operating system.

IET228
INTRODUCTION TO ROBOTICS
2 Credit Hours 2 Contact Hours
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.

IET247
ADVANCED MANUFACTURING PROCESSES
2 Credit Hours 2 Contact Hours
This course provides in-depth coverage of the processes required for advanced manufacturing and emerging technologies. Topics were selected from: Materials Engineering, Metal Forming (including tooling materials and tooling design considerations), Machining, Grinding, Particulate Materials Processing, Quality Assurance, Emerging Technologies, and Non-traditional Manufacturing Processes.
Prerequisites: MET225, IET125

IET266
QUALITY SYSTEM AUDITING AND CERTIFICATION
3 Credit Hours 3 Contact Hours
A study of verification and documentation principles as they relate to the management of quality systems. Topics covered include specification standards, procedures, auditing, and certifications.
Prerequisite: IET125

IET267
IET CAPSTONE
1 Credit Hour 2 Contact Hours
A course designed to allow students the opportunity to apply and integrate concepts and techniques learned in previous coursework. Project management topics such as scheduling, feasibility, and financial return on investment will be discussed. Students will choose an approved project based upon individual interest and background. Each project will include data collection, analysis and a written and oral presentation.
Prerequisite: permission

IET268
PROCESS IMPROVEMENT METHOD AND MEASUREMENT
3 Credit Hours 3 Contact Hours
The study and application of basic problem solving techniques, approaches to data collection, and data analysis, techniques for process evaluation and control, and an overview of commonly used metrics for monitoring process improvement efforts.
Prerequisites: MTH222, IET125

IET269
DIM METROLOGY/INSPECTION II
3 Credit Hours 4 Contact Hours
An in-depth study of measurement instruments and measuring techniques calibration procedures, repeatability and reproducibility studies, inspection points and planning and measurement error.
Prerequisite: IET270

IET270
DIM METROLOGY AND INSPECTION I
3 Credit Hours 3 Contact Hours
An in-depth study of measuring principles, instruments and techniques The course covers the measuring tools most commonly used in industry including coordinate measuring machines. Emphasis is placed on proper use of equipment in terms of error prevention and minimization.
Prerequisite: IET125

Interactive Media Technology

IMT121
INTERACTIVE MEDIA
3 Credit Hours 4 Contact Hours
Investigates interactive media techniques beginning with

those pioneered by media authors Meles, Castle, Richiardi, Waters, Zappa and others. New media practices such as compositing, bit-streaming, MIDI and virtual reality are introduced within a lab environment. Multimedia copyright law is also extensively addressed.

IMT122
GRAPHIC ARTS DESIGN
3 Credit Hours 4 Contact Hours

Necessary tools and components to produce hi-res and Web-based graphics are presented. New technologies such as "bit-stitching" are covered.

Prerequisite: ECA122

IMT123
COMPUTER BASED TRAINING DEVELOPMENT WITH DIRECTOR 8
3 Credit Hours 4 Contact Hours

Focuses on implementation of Macromedia Director 8 and LINGO in the development of Computer Based Training modules. Upon completion of the course the student will be able to author effective presentations for distance learning, marketing and Web-based training.

Prerequisites: ECA228, IMT121

IMT124
DESIGN FOR INTERNET WITH DREAMWEAVER
2 Credit Hours 3 Contact Hours

Upon completion of this course the student will have mastered implementation of Macromedia Dreamweaver for the development of graphic intensive Websites. Layer technology and elements of graphic design are presented and enhanced by the Dreamweaver design interface and related tools.

Prerequisites: ECA228, IMT121

IMT125
GRAPHIC ARTS - PROGRAMMING IN 3D STUDIO MAX I
3 Credit Hours 4 Contact Hours

Virtual reality worlds and artificial intelligence prototypes are used to illustrate the use of 3D graphics through the creation of animated models. Upon completion the student will be able to effectively use the 3D Studio Max interface and its complementary components.

Prerequisite: ECA122

IMT126
ANIMATION AND SHOCKWAVE DEVELOPMENT/MACROMEDIA
3 Credit Hours 4 Contact Hours

The focus is on the multimedia content creation through the implementation of Macromedia Flash. Upon completion, the student will have developed a mastery of animations, interface design and push technology through the Flash interface and its underlying programming concepts.game developers.

Prerequisites: ECA122,IMT121

IMT222
DIGITAL AUDIO/VIDEO PRODUCTION AND EDITING I
4 Credit Hours 6 Contact Hours

Examines from a "hands-on" standpoint the theories and practical uses of digital audio/video creation and production techniques. MIDI sequencing, music composition theory and audio environment creation will be covered. Digital video editing will also be covered. The SMPTE standards will be introduced, in conjunction with the combination of digital audio/video.

Prerequisites: ECA122,IMT121

IMT223
DIGITAL AUDIO/VIDEO PRODUCTION AND EDITING II
4 Credit Hours 6 Contact Hours

Examines the creation of completed mixed media products. CBT and WBT modules will be the focus of this course. Streaming media will be introduced using PYTHON and SMIL as the primary programming focus.

Prerequisite: IMT222

IMT224
C++ FOR GAMING DEVELOPMENT
3 Credit Hours 4 Contact Hours

Examines the concepts behind the latest game development techniques. The student will be presented with today's 3D virtual worlds. Textures, lighting, fog, ertices and transformations will be covered. Direct X, Direct Sound and Direct Draw will be the platform to ensure students acquire the latest skills used by today's leading game developers.

Prerequisite: ECA222

IMT225
PRODUCT DEVELOPMENT AND DISTRIBUTION
3 Credit Hours 4 Contact Hours

The focus for this course is the completed product. Issues such as copyrights, intellectual property ownership and deployment concerns will be examined. Cost and staging will also be discussed in depth.

Prerequisites: IMT121, IMT222, IMT223

IMT226
INTERSHIP
4 Credit Hours 4 Contact Hours

The student will spend an eight-week summer semester working hands-on in a true interactive media environment. The student will be responsible for many facets of this exciting industry. "Real world" experience will be the

key focus for this course.
Prerequisites: all IMT coursework.

IMT227
GRAPHIC ARTS - PROGRAMMING IN 3D STUDIO MAX II
3 Credit Hours 4 Contact Hours

3D design models are used to create technical based hypermedia presentations such as VRML worlds, Internet "walk-thru's" and portals. The student will be exposed to filters, plug-ins and a variety of complimentary tools to enhance the 3D Studio Max development experience.
Prerequisites: IMT125

IMT228
GRAPHIC ARTS - 3D DESIGN PRACTICUM
3 Credit Hours 5 Contact Hours

Virtual Reality Modeling Language as an integration tool will be used. The student will create a completed 3 dimensional "walk-thru" produce in this hands-on project based environment.
Prequisites: IMT227

IMT229
THEORY AND COMPOSITION I
2 Credit Hours 3 Contact Hours

Tone and its physical representations, meter and measure, major keys and scales, tempo, the MIDI software interface, computer software/hardware components and their setup are principal topics. The student will be able to explain elementary musical fundamentals and create musical compositions using computer software and hardware interfaces.
Prerequisites: ECA122, IMT222

IMT230
THEORY AND COMPOSITION II
2 Credit Hours 3 Contact Hours

Major and minor keys and scales, progressions, perfect and minor intervals, music symbols, musical forms, the chromatic scale and coda are presented through a series of hands-on labs, lectures and projects. Students will be able to describe fundamentals of music technology and create a variety of musical forms assisted by computer software / hardware technology.
Prerequisite: IMT229

IMT231
PROGRAMMING MIDI SAMPLES USING SOFTWARE LANGUAGES
3 Credit Hours 4 Contact Hours

The production of rhythm, melody, harmony and audio files using MIDI software / hardware interfaces is the focus. An understanding of computer software and hardware technology and MIDI interfaces to create audio files is the bottom line. The student will create a variety of audio files, to include a number of musical compositions, and will be able to describe the resulting compositions using terminology found in both the study of physics and the fundamentals of music. Copyright laws will also be discussed.
Prerequisites: IMT230, ECA127

IMT232
INSTRUMENTAL PRACTICUM
1 Credit Hour 2 Contact Hours

A practical application of the student's knowledge of music fundamentals, 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 Websites, training videos, marketing presentations and other practical applications of software engineering technology.
Prerequisite: IMT230

Mechanical Engineering Technology

MET121
INTRODUCTION TO DESIGN AND MECHANICAL ENGINEERING TECHNOLOGY
2 Credit Hours 3 Contact Hours

The purpose of this course is to familiarize the student with all areas of engineering technology and the role of the engineering technician. Teamwork, communication, and critical thinking skills are emphasized. The student is introduced to tools and strategies that enhance success at the college level. These competencies will ensure that the student has the skills and tools to compete in the global marketplace. Computer software packages are interlaced into the lessons to provide modern tools and applications as they relate to the engineering technologies.

MET122
MACHINE DESIGN
4 Credit Hours 5 Contact Hours

Descriptive, dimensional, and kinematic analysis of machine components, including bearings, shafts, couplings, cams, brakes, gear drives, belt and chain drives, and clutches. Laboratory work includes problem-solving in the design of machine components and systems.
Prerequisite: MET124

MET123
MATERIAL SCIENCE
2 Credit Hours 3 Contact Hours

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.
Corequisite: MET121

MET124
STATICS AND STRUCTURE OF MATERIALS
4 Credit Hours 5 Contact Hours

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.

Prerequisites: MTH121, PHY121, MET121

IMT127
GAME DESIGN
3 Credit hours 4 Contact Hours

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 design techno- logies and software available to implement animation used for video games. The student will gain an overall view of the gaming industry.

IMT233
VISUAL BASIC GAME PROGRAMMING
3 Credit Hours 4 Contact Hours

Takes the student into the realm of Windows-based video games. The student will design and program a Windows-based video game using Visual Basic. Intermediate video game design and Visual Basic Graphics programming will be stressed.

Prerequisite(s): ECA128

IMT234
Java Game Programming
3 Credit Hours 4 Contact Hours

Takes the student into the realm of Graphic User Interfaced, multi- threaded, multimedia-rich software development. The course uses the Java programming language as the tool of choice to design and develop exciting state of thea rt video games. The student will design and program a Java-based video game. Intermediate video game design and Java language programming will be stressed. Students will develop a portfolio of their work.

Prerequisite(s): ECA223

IMT235
FLASH GAME DESIGN AND DEV
3 Credit Hours 4 Contact Hours

The focus of the course is the design and development of video games for the Internet utilizing the Flash software package. Explore the various types and categories of video games and write interactive, animated video games. Upon conclusion of this course, the student will be able to understand the capabilities of Flash using Action Script and will be able to design and develop video games using the Flash software package.

Prerequisite(s): IMT126

MET221
ADVANCED STRENGTH OF MATERIAL
2 Credit Hours 3 Contact Hours

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.

Prerequisite: MET124

MET222
FLUID POWER
4 Credit Hours 5 Contact Hours

The purpose of this course is to study the subjects essential to understanding the design, analysis, operation and application of fluid power systems. Theory is presented, when necessary, to understand basic principles governing hydrostatics and hydrodynamics. Hands-on experimentation and familiarization of components are also included in this course of study.

Prerequisite: MET124

MET223
DYNAMICS
2 Credit Hours 3 Contact Hours

Methods are developed to analyze forces on moving bodies. Kinematics kinetics, plane motion, work, energy, power, impulse and momentum will be covered.

Prerequisite: MET124

MET225
MANUFACTURING PROCESSES
3 Credit Hours 4 Contact Hours

Students will investigate a variety of manufacturing techniques including casting, powder metallurgy, metal forming, hot and cold working, welding, brazing, soldering, bonding, chip-type machining processes, and cutting tools for machining. Scheduled tours of local industry augment the material.

Prerequisite: MET121

MET226
TECHNICAL PROJECT - MECHANICAL
2 Credit Hours 4 Contact Hours

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.

Prequisite: permission

MET227
THERMODYNAMICS AND HEAT TRANSFER
3 Credit Hours 4 Contact Hours

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 exhchangers. Emphasis is placed on learning the fundamentals and applying them to solving problems.

Prerequisites: MET121, MTH122, PHY121

Mechanical Service Technology

MST121
BLUEPRINT READING
2 Credit Hours 3 Contact Hours

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
HYDRAULIC AND PNEUMATIC PRINCIPLES
3 Credit Hours 4 Contact Hours

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.

Corequisite: MTH101

MST123
HYDRAULIC AND PNEUMATIC APPLICATIONS
3 Credit Hours 4 Contact Hours

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.

Corequisite: MST122

MST124
FURNACE COMBUSTION PRINCIPLES
1 Credit Hour 1 Contact Hours

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.

MST125
BASIC PUMPS
3 Credit Hours 4 Contact Hours

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.

Corequisite: MTH101

MST126
PIPEFITTING PRINCIPLES
2 Credit Hours 2 Contact Hours

Piping systems, valves, fittings, metal piping and non-metallic piping are identified and their use and maintenance are discussed. Strainers, filters, traps and other accessories such as pressure and temperature gauges are reviewed, with a description of how they work and required maintenance.

Corequisite: MTH101

MST127
PRINCIPLES OF WELDING
3 Credit Hours 3 Contact Hours

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.

Corequisite: MST128

MST128
WELDING LAB
4 Credit Hours 8 Contact Hours

Safe working procedures are reviewed first to teach the student safe working practices while using welding and sheet metal forming, cutting and joining equipment. Instruction on SMAW, MIG and TIG welding equipment follows with 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 usable items. Gas welding, cutting and plasma cutting are also presented and practiced during this course.

Corequisite: MST127

MST131
STATISTICAL PROCESS CONTROL CHARTS
2 Credit Hours 2 Contact Hours

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.

Prerequisite: MTH101

MST134
HYDRAULIC AND PNEUMATIC SYSTEMS
6 Credit Hours 8 Contact Hours

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.

Corequisite: MTH101

MST221
MECHANICAL DRIVE COMPONENT
3 Credit Hours 4 Contact Hours

The study of bearings, shafts, couplings, cams, brakes, gear drives, belt drives, chain drives and clutches. Included are component application and maintenance.

MST224
DIMENSIONAL METROLOGY
2 Credit Hours 4 Contact Hours

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 Credit Hour 3 Contact Hours

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 WELDING – TIG
3 Credit Hours 5 Contact Hours

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, types of tungsten electrodes.

Prerequisites: MST127, MST128

MST227
METALLIC INERT GAS WELDING – MIG/FCAW
3 Credit Hours 5 Contact Hours

Study and application of MIG and FCAW with electrode application and selection. Properties of gases with regard to flow and regulation in gas metal-arc welding are covered along with a study of mode transfer in MIG welding. Welding techniques are studied in relation to welding steels and nonferrous materials. Certification in all position is a possibility.

Prerequisites: MST127, MST128

MST228
SHIELDED METAL ARC I
3 Credit Hours 5 Contact Hours

SMAW is studied in detail and performed in laboratory exercises. In addition, the selection and application of electrodes as they relate to all position welding is covered with both pipe and plate. Certification in all positions is a possibility.

P**rerequisites: MST127, MST128**

Course Descriptions General Studies and Public Service Programs

"Contact hours" may involve lecture, laboratory and/or other instructor-directed activities.

Biology

BIO101
INTRODUCTION TO ANATOMY AND PHYSIOLOGY
3 Credit Hours 3 Contact Hours

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 Credit Hours 5 Contact Hours

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.

Prerequisites: BIO101 or high school anatomy and physiology within the last five years.

BIO122
ANATOMY AND PHYSIOLOGY II
4 Credit Hours 5 Contact Hours

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.

Prerequisite: BIO121

BIO123
PRINCIPLES OF HUMAN STRUCTURE AND FUNCTION
5 Credit Hours 7 Contact Hours

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.

Prerequisites: BIO101 or high school anatomy and physiology within the last five years.

BIO124
PATHOPHYSIOLOGY
3 Credit Hours 3 Contact Hours

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.

Prerequisites: BIO122 or BIO123

BIO125
MEDICAL TERMINOLOGY
3 Credit Hours 3 Contact Hours

An introduction to medical word structure, including prefixes, suffixes, roots, plurals and abbreviations. Spelling, definitions and pronunciation are stressed and reinforced by frequent examination.

BIO126
SCIENCE, ENERGY AND THE ENVIRONMENT
4 Credit Hours 5 Contact Hours

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 Credit Hours 6 Contact Hours

This course 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.

BIO221
PRINCIPLES OF MICROBIOLOGY
4 Credit Hours 6 Contact Hours

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.
Prerequisites: BIO121 and BIO122 or BIO123

BIO222
PHARMACOLOGY
3 Credit Hours 3 Contact Hours

A course that introduces the student to general pharmacology, including drug nomenclature, classifications, and therapeutic and side effects on the body systems and functions.
Prerequisites: BIO122 or BIO123

Center for Accelerated Learning (CAL)

CAL101
READING FOR TECHNICAL COMPREHENSION
3 Credit Hours 3 Contact Hours

A computer-assisted laboratory course designed to enhance students' performance in college-level coursework. Included in the curriculum are units on effective note-taking, organizational skills, test-taking strategies, critical reading skills, speed reading, stress reduction strategies, library utilization skills, learning styles and other related topics. Placement based on score achieved on entrance assessment tests. Proficiency of 80% constitutes passing (A,B,NC/F).

CAL102
INTRODUCTION TO GRAMMAR
3 Credit Hours 3 Contact Hours

A computer-assisted course that stresses basic rules of grammar, punctuation, spelling and sentence writing. Placement based on score achieved on entrance assessment tests. Proficiency of 80% constitutes passing (A,B,NC/F).

CAL103
MATH FUNDAMENTALS
4 Credit Hours 4 Contact Hours

This course covers the fundamentals of arithmetic and basic algebraic concepts. Topics include arithmetic operations, fractions, decimals, percentages, ratios, proportions, metric system, areas, volumes, signed numbers, introduction to equations and application problems. Placement based on score achieved on entrance assessment tests. Proficiency of 80% constitutes passing. (A,B,NC/F).

CAL104
COMPUTER CONCEPTS
1 Credit Hour 2 Contact Hours

This self-paced, computer-based 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 (A,B,NC/F).

CAL105
WRITING FUNDAMENTALS
3 Credit Hours 3 Contact Hours

A course covering the fundamentals of grammar, punctuation and usage. This systematic review is incorporated within sentence and paragraph applications. Proficiency of 80% constitutes passing (A,B,NC/F).

Chemistry

CHM101
INTRODUCTION TO CHEMISTRY
4 Credit Hours 4 Contact Hours

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.
Prerequisites: MTH101

CHM121
GENERAL CHEMISTRY
4 Credit Hours 5 Contact Hours

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.
Prerequisites: CHM101 or high school chemistry within the last five years.

CHM122
ORGANIC AND BIOLOGICAL CHEMISTRY
4 Credit Hours 5 Contact Hours

The course examines the structures, names, reactions and physical properties of the major groups of organic and biological compounds including alkanes, alkenes, alkynes, aromatics, alcohols, ethers, aldehydes, ketones, carboxylic acids and esters and biological compounds including carbohydrates 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.
Prerequisite: CHM121

Early Childhood Education

ECE121
INTRODUCTION TO EARLY CHILDHOOD EDUCATION
3 Credit Hours 3 Contact Hours

This course introduces the field of early childhood education and child care history, philosophies, goals, practices and professional affiliation; explores the range of pre-kindergarten 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 observation hours are required.
Prerequisite: ENG102

ECE122
CURRICULUM DESIGN AND INSTRUCTION
3 Credit Hours 3 Contact Hours

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. Twenty field observation hours required.
Prerequisite(s): ECE121

ECE123
HEALTH AND NUTRITION
3 Credit Hours 3 Contact Hours

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 observations hours required.

ECE124
INFANT-TODDLER CURRICULUM
2 Credit Hours 2 Contact Hours

Studies theory and practice of infant-toddler curriculum including current research. Goal setting, curriculum design, lesson planning and instructional methods bases on NAEYC guidelines. Five observation hours are required.
Prerequisite: PSY125

ECE221
LANGUAGE ARTS
3 Credit Hours 3 Contact Hours

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.
Prerequisite: ECE122

ECE222
CREATIVE MATERIALS AND GUIDED PLAY
3 Credit Hours 3 Contact Hours

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.
Prerequisite: ECE122

ECE223
COMMUNITY AND FAMILY-BASED PROGRAMS
3 Credit Hours 3 Contact Hours

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, socio-economic 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.
Prerequisite: ECE121

ECE224
EARLY CHILDHOOD PROGRAM ADMINISTRATION
3 Credit Hours 3 Contact Hours

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.
Prerequisite: ECE121

ECE225
THE EXCEPTIONAL CHILD
3 Credit Hours 3 Contact Hours

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.
Prerequisites: ECE222, ECE221

ECE226
WRAP-AROUND PROGRAMS
2 Credit Hours 2 Contact Hours

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.
Prerequisite: ECE121

ECE227
PRACTICUM
3 Credit Hours 15 Contact Hours

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 Credit Hours 3 Contact Hours

Explores the theory and role of phonics and phonemic awareness as well as current research regarding phonics instruction. Five observation hours are required.
Prerequisite: ECE221

English

ENG101
INTRODUCTION TO WRITING
3 Credit Hours 3 Contact Hours

An introductory writing course stressing effective essay composition skills (e.g. essay structure and development and editing and revision skills) while applying the basic rules of grammar and mechanics.
Prerequisite: CAL105, proficiency 80%

ENG102
READING FOR CRITICAL ANALYSIS
3 Credit Hours 3 Contact Hours

Reading for Critical Analysis teaches critical comprehension and analysis of technical reading material. The course includes advanced application of critical reading and thinking skills.
Prerequisite: proficiency 80%

ENG122
COMMUNICATION THEORY
3 Credit Hours 3 Contact Hours

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.

ENG123
BUSINESS COMMUNICATION
3 Credit Hours 3 Contact Hours

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.
Prerequisite: ENG124

ENG124
COLLEGE COMPOSITION
3 Credit Hours 3 Contact Hours

Students learn to write effective papers based on reading and discussing essays after a review of grammar and punctuation. Emphasis is on the process of prewriting, writing and revising to achieve clarity and development. A research report requires APA or MLA documentation.
Prerequisite: ENG101

ENG125
STRATEGIES 2000
2 Credit Hours 2 Contact Hours

Designed to assist students to develop skills in setting and attaining goals, managing time, thinking critically, resolving conflict and prioritizing their college work, family life and work schedules to achieve academic success. Students who have been academically dismissed and return to register for classes are required to take this course.

ENG221
TECHNICAL REPORT WRITING
3 Credit Hours 3 Contact Hours

Course stresses clarity, logic and appropriate organization in informal and formal technical reports. An oral presentation and/or a proposal may be required.
Prerequisite: ENG124

ENG222
MEDICAL TECHNICAL REPORT WRITING
3 Credit Hours 3 Contact Hours

Health Information Technology students develop skills in various kind of technical communications used in their work, such as letters, memos, instructions, short reports, abstracts, summaries and proposals.
Prerequisite: ENG124
Corequisites: HIT223

ENG223
JOB SEARCH SKILLS
2 Credit Hours 2 Contact Hours

Focuses on practicing techniques for self-assessment, developing job objectives, writing effective letters of application, designing effective resumes and interviewing for a job. Skills needed to keep a position and to advance are also emphasized.
Prerequisite: ENG101
Corequisite: ENG124

ENG224
COMPOSITION AND LITERATURE
3 Credit Hours 3 Contact Hours

Includes literary selections from fiction, poetry and drama. Student will read, discuss, analyze and write critical interpretations of representative works.
Prerequisite: ENG124

ENG225
PORTFOLIO DEVELOPMENT
3 Credit Hours 3 Contact Hours

Students develop a portfolio of previous personal, educational and occupational learning experiences. Written guidelines and classroom instruction are provided in preparing the portfolio. By arrangement with department head.

ENG226
MASTER STUDENT
3 Credit Hours 3 Contact Hours

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.

Fire Science Technology

FST121
INTRODUCTION TO FIRE SCIENCE
2 Credit Hours 2 Contact Hours

A study of the organizational procedures of the fire science service including the structure and function of battalion and company as components of municipal organizations, and basic fire tactics. Discussion topics include the basic history of fire science, career options, personnel management and training, fire equipment and apparatus, communication, terminology, records and reports, insurance rating systems and the law as it pertains to the fire service.

FST122
FIRE HYDRAULICS
3 Credit Hours 3 Contact Hours

A study of basic hydraulic theory making use of basic laws of mathematics. Covers drafting of water, velocity and discharge, friction loss, engine and nozzle pressure, fire streams, pressure losses, municipal and industrial water supplies, stand pipes and sprinklers, flow and pump testing and applications in fire science.
Prerequisite: FST121

FST123
FIRE DETECTION AND SUPPRESSION
3 Credit Hours 3 Contact Hours

The design and operation of basic protection systems. Includes water distribution, detection, alarm and watchman services, protection systems for special hazards, a detailed examination of carbon dioxide, dry chemical, foam and water spray systems.
Prerequisite: FST121

FST124
FIRE PREVENTION AND SAFETY CODES
3 Credit Hours 3 Contact Hours

The study of inspection techniques and procedures along with the history and development of codes. Emphasis is placed on the nature and scope of legal statutes and related codes in fire prevention control. How to perform building inspections, set up a fire prevention bureau including duties and suggested guidelines on a local, state, and national scope. Recognition and correction of fire hazards, public relations and enforcement of codes.

Prerequisite: FST121

FST125
BUILDING CONSTRUCTION FOR FIRE SCIENCE
2 Credit Hours 2 Contact Hours

The study of fundamentals of building construction as related to fire protection, codes, laws, hazards and fire ratings. Design and materials as applied to fire resistance.

Prerequisite: FST124

FST126
ENVIRONMENTAL SCIENCE
3 Credit Hours 3 Contact Hours

This course focuses on water and air pollution, heat, energy, pesticides and plastics. Helps the firefighter better understand the danger posed by chemicals encountered in fighting fires. Explains dangers of new chemicals and materials in today's changing world.

Prerequisite: FST121

FST127
EMERGENCY MEDICAL TECHNICIAN (EMT)
5 Credit Hours 8 Contact Hours

This intense course covers all emergency medical techniques under the new 1994 U.S. D.O.T. curriculum approved by the Ohio E.M.S. Board to be within the responsibilities of the EMT-B providing emergency care with an ambulance service. The course consists of 120 hours of classroom instruction and 20 hours of clinical experience in a hospital emergency room. This course meets the requirements established by the U.S. D.O.T. for the 1994 EMT-Basic Standard Curriculum.

FST221
COMMAND TACTICS AND STRATEGIES
3 Credit Hours 3 Contact Hours

Techniques and procedures of firefighting are studied, with emphasis on the firefighter's role as an individual and as a member of a firefighting team. Included are the methods of extinguishing fires, rescue procedures, salvage and prevention of rekindling. Group and command operations include pre-planning of firefighting operations, size-up, employment of personnel and equipment, and post mortem.

Prerequisite: FST121

FST222
MANAGEMENT IN FIRE SCIENCE
3 Credit Hours 3 Contact Hours

Focus is on the universal concepts and principles of modern management theory within the framework of a fire service environment. Overview of the fire service officer's need for self-development in the face of increasingly complex functions, and challenges the fire officer faces. An exploration of organizational principles with emphasis on fire department organization including a study of the history, types, methods and principles of department organization, both formal and informal, line and staff. Special emphasis will be placed on supervisory responsibilities, functions and skills.

Prerequisite: FST121

FST223
FIRE INVESTIGATION METHODS
3 Credit Hours 3 Contact Hours

An analysis of the principles of fire investigation, arson laws, interrogation of witnesses, applications of photography and preservation of evidence. Preparation of reports and adjustments of insured losses will also be included. Arson will be discussed including the nature of fire, point of origin, development of evidence, interview techniques, motives and court testimony.

Prerequisite: FST125

FST224
LEGAL ASPECTS OF FIRE SERVICE
2 Credit Hours 2 Contact Hours

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 Credit Hours 3 Contact Hours

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 Credit Hours 3 Contact Hours

Broad management theory and application of basic strategy and tactics for company officers is the focus of this course.

FST227
PERSONNEL TRAINING AND PUBLIC RELATIONS
2 Credit Hours 2 Contact Hours

An introduction to methods of instruction, applications of audiovisual equipment, testing and evaluation, preparation of materials and lesson plans with an emphasis on organizational training and program planning. This includes the building of goodwill, handling complaints and follow-ups, personal contacts, publicity and promotional efforts.

Special Courses in the General Studies/Public Service Technologies Division

GSD201
GENERAL INDEPENDENT STUDY
1 Credit Hour 10 Contact Hours

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
GENERAL INDEPENDENT STUDY
2 Credit Hours 20 Contact Hours

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
GENERAL INDEPENDENT STUDY
3 Credit Hours 30 Contact Hours

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
GENERAL INDEPENDENT STUDY
4 Credit Hours 40 Contact Hours

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.

Human Service Development Institute

HST223
INFORMATION AND TIME MANAGEMENT SKILLS
2 Credit Hours 2 Contact Hours

The focus of this course is on key methods of reducing information overload; developing self-knowledge as a method of understanding control and irrational beliefs; learning how to better control your time and set priorities; methods and techniques of organizing time and materials.

HST224
PRACTICUM - INFORMATION AND TIME MANAGEMENT SKILLS
1 Credit Hours 1 Contact Hour

Students will practice techniques related to the Information and Time Management Skills course. They will apply skills learned during class instruction directly to their practicum.

Prerequisite: Must be taken in conjunction with or upon completion of HST223.

HST246
COLLABORATION FOR SOCIAL SERVICE WORKERS
2 Credit Hours 2 Contact Hours

This course is designed to provide the student with an understanding of the various agencies and programs available to customers. They will learn how to better access services from outside agencies, how to decrease friction between agencies and how to work together as a team to provide needed services and programs to customers.

HST247
PRACTICUM - COLLABORATION FOR SOCIAL SERVICE WORKERS
1 Credit Hour 1 Contact Hour

Students will practice techniques related to the Collaboration for Social Service Workers course. They will apply skills learned during class instruction directly to their practicum.

Prerequisite: must be taken in conjunction with or upon completion of HST246.

HST250
STRATEGIES FOR CHANGE
2 Credit Hours 2 Contact Hours

This course will focus on the changing human service delivery system and understanding change and its impact on the job and the workplace. Students will develop methods and strategies for dealing with stress in the workplace and develop techniques for working effectively as a team member.

HST257
INTERVIEWING SKILLS FOR SOCIAL SERVICE WORKERS
2 Credit Hours 2 Contact Hours

This course deals with basic theory and techniques of focused interviewing. Emphasis is on the development of skills necessary for effective focused and group interviewing techniques including the use of videotape.

HST258
FAMILY ASSESSMENT FOR HUMAN SERVICE WORKERS
1 Credit Hours 1 Contact Hour

The course focuses on the knowledge and skills needed to assess family needs; understand the assessment process; identify types of assessment and interviewing skills needed for assessment and documentation procedures; effectively assess for service referrals for families to achieve self- sufficiency.

HST260
PRACTICUM – FAMILY ASSESSMENT
1 Credit Hour 1 Contact Hour

Students will practice techniques related to the Family Assessment course. They will apply skills learned during class instruction directly to their practicum.

Corequisite: must be taken in conjunction with or upon completion of HST258.

HST261
WELFARE TO WORK
2 Credit Hours 2 Contact Hours

This course is designed to assist students with the necessary skills and techniques to assist consumers with the employment placement and job retention skills and develop job sites in order to meet the legislative requirements of the welfare reform laws.

HST262
PRACTICUM – WELFARE TO WORK
1 Credit Hour 1 Contact Hour

Students will practice techniques related to the Welfare to Work course. They will apply skills learned during class instruction directly to their practicum.

Prerequisite: must be taken in conjunction with or upon completion of HST261.

HST264
CASE MANAGEMENT FOR SELF-SUFFICIENCY
1 Credit Hour 1 Contact Hour

Students will examine the principles and procedures involved in case management. All aspects of case management will be considered in respect to the consumer's goal of self-sufficiency. Three phases of case management are described and related to interviewing, documentation and ethical and legal issues.

HST265
PRACTICUM - CASE MANAGEMENT FOR SELF-SUFFICIENCY
1 Credit Hour 1 Contact Hour

Students will practice techniques related to the Case Management for Self-Sufficiency course. They will apply skills learned during class instruction directly to their practicum.

Prerequisite: must be taken in conjunction with or upon completion of HST264.

HST266
OVERVIEW OF JOB AND FAMILY SERVICES
2 Credit Hours 2 Contact Hours

The focus of this course is to provide students with the history and background of the human service delivery system in the state of Ohio. Students will study the current programs being offered by ODJFS, how they impact the various jobs within the agency and how they affect program consumers.

HST267
PRACTICUM – OVERVIEW OF JOB AND FAMILY SERVICES
1 Credit Hour 1 Contact Hour

Students will practice techniques related to the Overview of Job and Family Services course. They will apply skills learned during the class instruction directly to their practicum.

Prerequisite: must be taken in conjunction with or upon completion of HST266.

HST268
MEDICAID-AGED,BLIND & DISABLED
2 Credit Hours 2 Contact Hours

Medicaid- Aged, Blind & Disabled provides a review of the basic eligibility determination processes used in the Aged, Blind and Disabled Medicaid Program of Ohio. It is designed to give Job and Family Services workers in county agencies a better understanding of how eligibility for this program is determined.

HST269 - MEDICAID-ABD PRACTICUM
1 Credit Hours 15 Contact Hours

Students will practice techniques and skills related to the Medicaid cours. They will apply skills and knowledge learned during class instruction directly to their practicum.

Inter-Departmental Studies

IDS206
LEADERSHIP DYNAMICS: INDIVIDUAL DEVELOPMENT AND INFLUENCE
3 Credit Hours 3 Contact Hours

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 format are main features of this course.

Mathematics

MTH101
INTRODUCTION TO ALGEBRA
4 Credit Hours 4 Contact Hours

Topics are signed numbers and variable expressions, solving equations and inequalities, polynomials, factoring, algebraic fractions, graphs and linear equations.
Prerequisite: CAL103 or passing score on placement test.

MTH121
INTERMEDIATE ALGEBRA AND TRIGONOMETRY I
4 Credit Hours 4 Contact Hours

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.
Prerequisite: MTH101 or passing score on placement test

MTH122

INTERMEDIATE ALGEBRA AND TRIGONOMETRY II
3 Credit Hours 4 Contact Hours

Topics are solving oblique triangles, vectors, graphs of trigonometry functions, complex numbers, exponents, radicals, exponential and logarithmic functions, higher degree equations, additional equations and inequalities.
Prerequisite: MTH121

MTH123
INTERMEDIATE ALGEBRA
3 Credit Hours 3 Contact Hours

Topics are fundamental operations of algebra, functions and graphs, systems of linear equations, factoring, fractions and quadratic equations.
Prerequisites: CAL103 or passing score on placement test.

MTH221
CONCEPTS OF CALCULUS
3 Credit Hours 3 Contact Hours

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.
Prerequisite: MTH122

MTH222
STATISTICS
3 Credit Hours 3 Contact Hours

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.
Prerequisites: CAL103 or passing score on placement test.

MTH223
ANALYTIC GEOMETRY-CALCULUS I
4 Credit Hours 4 Contact Hours

Analytic geometry, limits, continuity, derivatives, tangent and norma lines, derivatives of trigonometric functions, related rates, Newton's method, Rolle's theorem, mean value theorem, extrema of functions, antiderivatives, definite integrals, indefinite integrals, areas, and volumes.
Prerequisite: MTH122

Philosophy

PHL122
ETHICS
3 Credit Hours 3 Contact Hours

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 Credit Hours 5 Contact Hours

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.
Prerequisite: MTH101 or passing score on algebra

placement test.

PHY121
PHYSICS I
4 Credit Hours **5 Contact Hours**

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.

Prerequisite: MTH 121 preferred.
Corequisite: MTH121 may be used.

PHY122
PHYSICS II
4 Credit Hours **5 Contact Hours**

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.

Prerequisites: PHY121, MTH121

Political Science

PSC 121
POLITICAL SCIENCE
3 Credit Hours **3 Contact Hours**

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

PSY121
GENERAL PSYCHOLOGY
3 Credit Hours **3 Contact Hours**

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 Credit Hours **3 Contact Hours**

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.

Prerequisite: PSY121 or permission.

PSY123
HUMAN GROWTH AND DEVELOPMENT
3 Credit Hours **3 Contact Hours**

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 Credit Hours **3 Contact Hours**

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 I
3 Credit Hours **3 Contact Hours**

A detailed examination of infant/toddler growth and maturation. Physical, cognitive, affective, social, moral/ethical and personality development are studied. Ten field observation hours required.

Prerequisites: PSY121 or PSY124

PSY127
GROUP PROCESSES
4 Credit Hours **4 Contact Hours**

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 Credit Hours **3 Contact Hours**

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.

Prerequisite: PSY121

PSY222
PSYCHOLOGICAL ASPECT OF THERAPY
3 Credit Hours **3 Contact Hours**

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.

PSY223
CHILD DEVELOPMENT II
3 Credit Hours 3 Contact Hours

A continuation of PSY 125, focusing on the preschool years (to age eight) with some treatment of selected topics relating to later stages. Ten field observation hours required.

Prerequisite: PSY125

Sociology

SOC121
SOCIOLOGY
3 Credit Hours 3 Contact Hours

Introduces the general theories of the field, stressing the impact of groups and institutions on social behavior and examines factors that contribute to cultural change, social problems/issues and social interaction. Topics include culture, deviance, race, gender, age, socioeconomic status and technology and change.

SOC122
SOCIETY and TECHNOLOGY
3 Credit Hours 3 Contact Hours

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 Credit Hours 3 Contact Hours

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
U.S. SOCIAL SYSTEMS
3 Credit Hours 3 Contact Hours

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.

Prerequisite: SOC121 or permission.

SOC125
INTRODUCTION TO GERONTOLOGY
3 Credit Hours 3 Contact Hours

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 ASPECTS OF AGING
3 Credit Hours 3 Contact Hours

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.

Prerequisite: SWK128 or permission.

SOC221
SOCIAL PROBLEMS
3 Credit Hours 3 Contact Hours

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.

Prerequisite: SOC121 or permission.

SOC222 - JUVENILE DELINQUENCY
3 Credit Hours 3 Contact Hours

Introduces students to the nature and causes of deviant behavior and juvenile delinquency. Major theories that have been proposed as explanations of deviant and delinquent behavior will be reviewed and evaluated. Students will gain an understanding of the life experiences leading up to deviant and delinquent behavior, to the external and internal influences on the delinquent, and to the choicesthat 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.

Prerequisite(s): SOC121

SOC225
CULTURAL DIVERSITY
3 Credit Hours 3 Contact Hours

This course provides students with an understanding of the cultural diversity of our changing society. Students will examine and discuss diverse values and characteristics of ethnic and minority populations and how they influence society and social and economic processes and how they influence race relations.

SOC227
SOCIAL SERVICE FOR ELDERLY
3 Credit Hours 3 Contact Hours

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.
Prerequisite: SWK121 or permission.

Social Work

SWK121
INTRODUCTION TO SOCIAL WELFARE
3 Credit Hours 3 Contact Hours

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
3 Credit Hours 3 Contact Hours

Introduces the student to fundamental social work theory and practice principles. The case management process is examined with emphasis on knowledge and use of community resources, compliance with professional and governmental standards, and development of computer support skills.
Prerequisite: SWK121

SWK125
SUBSTANCE ABUSE
3 Credit Hours 3 Contact Hours

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 SOCIAL ENVIRONMENT
3 Credit Hours 3 Contact Hours

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.
Prerequisites: SOC121 or SWK121 or permission.

SWK127
GROUP PROCESSES
4 Credit Hours 4 Contact Hours

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
3 Credit Hours 3 Contact Hours

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 ASPECTS OF AGING
3 Credit Hours 3 Contact Hours

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.
Prerequisite: SWK128 or permission

SWK130
METHODS IN PRACTICE II
3 Credit Hours 3 Contact Hours

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.
Prerequisite: SWK 124

SWK223
GENDER STUDIES
3 Credit Hours 3 Contact Hours

Examines the way in which culture shapes and defines

the roles of both men and women in society, particularly as reflected in employment, economics, socialization, religion, and health.

SWK224
POVERTY IN THE U.S.
3 Credit Hours 3 Contact Hours

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.
Prerequisites: SOC121 or SWK121

SWK225
VICTIM AND CRISIS INTERVENTION
3 Credit Hours 3 Contact Hours

The issues of victimization and theories and practice of intervention are the focus of this course: risk factors, legal issues, interventions of child abuse, spousal abuse, elder abuse and co-dependency.
Prerequisite: SWK121

SWK226
SOCIAL SERVICE LAW
3 Credit Hours 3 Contact Hours

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.
Prerequisite: SWK121

SWK227
SOCIAL SERVICE PRACTICUM
2 Credit Hours 14 Contact Hours

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. *Note: students must arrange site placement with the HSST Practicum Coordinator no later than the tenth week of the semester preceding the intended practicum experience.*
Prerequisite: sophomore standing in the HSST program and completion of practicum preparation criteria.
Corequisite: SWK228

SWK228
PRACTICUM SEMINAR
1 Credit Hour 1 Contact Hour

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. *Note: students must arrange site placement with the HSST Practicum Coordinator no later than the tenth week of the semester preceding the intended practicum experience.*
Prerequisite: sophomore standing in the HSST program and completion of practicum preparation criteria.
Corequisite: SWK227

SWK229
WOMEN'S ISSUES IN SOCIAL WORK
3 Credit Hours 3 Contact Hours

A study of the contemporary issues facing women and their impact on the social service system. Topics include women and work, feminist theory, gender bias, economic security and welfare, women and aging, and patterns of social service programs targeted for women.
Prerequisite: SWK121

SWK230
SOCIAL SERVICES FOR THE ELDERLY
3 Credit Hours 3 Contact Hours

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.
Prerequisite: SWK121 or permission.

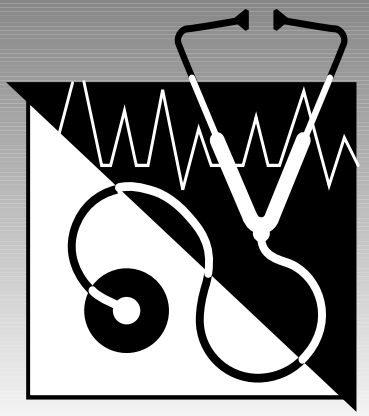
Speech

SPH121
EFFECTIVE SPEAKING
3 Credit Hours 3 Contact Hours

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.

SPH122
INTERGROUP COMMUNICATION
3 Credit Hours 3 Contact Hours

Students will examine the role of the individual in small work and social group environments. Primary aspects of the course will concentrate on the student conducting research in a variety of topic areas, organizing the collected data in written format and then being able to present the results of the research verbally and non-verbally to a small audience. Students will relate principles of group dynamic theory to actual application in the classroom setting. Research areas will include topics of primary concern to the student's technology.



Course Descriptions Health Technologies

"Contact hours" may involve lecture, laboratory activities, clinical practice and/or instructor-directed activities.

Dental Hygiene

DHY121
HEAD, NECK AND ORAL ANATOMY
2 Credit Hours 3 Contact Hours

Gross anatomy of the head and neck, tooth morphology and physiology of occlusion.

Prerequisite: admission to the dental hygiene program

DHY122
ORAL HISTORY AND EMBRYOLOGY
1 Credit Hour 1 Contact Hour

Embryological development and histologic characteristics of the orofacial organs and structures.

Prerequisite: admission to the dental hygiene program.

DHY123
DENTAL RADIOGRAPHY
3 Credit Hours 5 Contact Hours

Fundamental knowledge of radiographic principles and safety considerations. Skill development in image production, processing, mounting techniques, and radiographic interpretation.

Corequisite: DHY121

DHY124
PERIODONTOLOGY I
1 Credit Hour 1 Contact Hour

Etiology, diagnosis, and prevention of diseases affecting tissues that support, attach, and surround the teeth.

Prerequisite: DHY122

DHY125
DENTAL MATERIALS
3 Credit Hours 5 Contact Hours

Fundamental knowledge of the dental materials commonly used in contemporary dental practice including their physical, chemical, and manipulative characteristics and skill development in correctly using these materials.

Prerequisite: DHY131

DHY126
PATHOLOGY
2 Credit Hours 3 Contact Hours

Concepts of developmental/growth disturbances; diseases of microbiological origin; injury and repair; metabolic and disease disturbances; and oral manifestations of diseases and conditions.

Prerequisite: DHY122

DHY131
FUNDAMENTALS OF DENTAL HYGIENE PRACTICE
4 Credit Hours 8 Contact Hours

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. Concepts are applied in a preclinical setting with manikins and student partners.

Prerequisite: admission to the dental hygiene program.

DHY132
DENTAL HYGIENE THEORY I
2 Credit Hours 2 Contact Hours

Build upon fundamentals to provide further study of dental hygiene practices including, but not limited to, dental specialities, treatment planning, and management of medical/dental emergencies.

Prerequisite: DHY131
Corequisite: DHY133

DHY133
CLINICAL DENTAL HYGIENE I
2 Credit Hours 6 Contact Hours

Patient care experiences which reinforce fundamentals and which correlate with, and allow the application of, dental hygiene procedures and concepts presented in Dental Hygiene Theory I. Emphasis on application of basic skills and professionalism.

Prerequisites: DHY131, DHY123
Corequisite: DHY132

DHY134
CLINICAL DENTAL HYGIENE I-A
1 Credit Hour 3 Contact Hours
Patient care experiences which allow further development of clinical skills and application of concepts. Emphasis on patient management and effective communications.
Prerequisite: DHY133

DHY221
NUTRITION IN DENTISTRY
1 Credit Hour 1 Contact Hour
Basic concepts of nutrition and the effects on general as well as oral health. Emphasis on the role of nutrition in dentistry for disease prevention and health promotion.
Prerequisite: DHY132

DHY222
DENTAL PHARMACOLOGY
2 Credit Hours 2 Contact Hours
A study of therapeutic agents used in dentistry including indications, contraindications, methods of administration, side effects, and drug interactions. Special emphasis on pain control strategies.
Prerequisites: DHY126, BIO221

DHY223
COMMUNITY ORAL HEALTH
2 Credit Hours 3 Contact Hours
Concepts of assessing, planning, implementing and evaluating oral health programs for community groups. Learning experiences emphasize reading scientific literature, understanding statistical reporting, and relating to community health education agencies and programs in the practical application of the concepts. Field experiences are required.
Prerequisite: DHY134

DHY224
PERIODONTOLOGY II
1 Credit Hour 1 Contact Hour
Advanced treatment modalities and current research in periodontal therapy.
Prerequisite: DHY124

DHY231
DENTAL HYGIENE THEORY II
2 Credit Hours 2 Contact Hours
Further exploration of treatment modalities and dental hygiene services such as dietary analysis and counseling, oral hygiene indices, and tobacco use and cessation education. Focus on the development of more complex dental hygiene treatment plans.
Prerequisite: DHY132
Corequisite: DHY232

DHY232
CLINICAL DENTAL HYGIENE II
4 Credit Hours 12 Contact Hours
Patient care experiences which refine fundamentals and correlate with and allow application of, dental hygiene procedures and lecture concepts presented in Dental Hygiene Theory II. Emphasis on total patient care and treatment planning, including judgement and decision making.
Prerequisite: DHY134

DHY233
DENTAL HYGIENE THEORY III
2 Credit Hours 2 Contact Hours
Further exploration of treatment modalities, and adjunct procedures. Focus on transitions to practice, including principles of office management, jurisprudence, and current issues in dental hygiene.
Prerequisite: DHY231
Corequisite: DHY234

DHY234
CLINICAL DENTAL HYGIENE III
5 Credit Hours 15 Contact Hours
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.
Prerequisite: DHY232

Health Information Technology

HIT121
INTRODUCTION TO HEALTH INFORMATION TECHNOLOGY
4 Credit Hours 6 Contact Hours
The structure of healthcare 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 healthcare 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.
Prerequisite: admission to the health information technology program.

HIT122
ANCILLARY HEALTH RECORDS AND REGISTRIES
3 Credit Hours 4 Contact Hours

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.

Prerequisite: HIT121

HIT123
MEDICOLEGAL ASPECTS
2 Credit Hours 2 Contact Hours

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.

Prerequisite: HIT121

HIT124
INTRODUCTION TO CODING
4 Credit Hours 6 Contact Hours

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.

Prerequisites: HIT121, BIO123 OR BIO122
Corequisite: BIO124

HIT221
ADVANCED CODING
3 Credit Hours 4 Contact Hours

Structure of CPT-4/HCPCS coding system and its applications.

Prerequisites: HIT124, BIO222

HIT222
STATISTICS AND DATA RETRIEVAL
3 Credit Hours 4 Contact Hours

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.

Prerequisites: HIT124, HIT122, HIT123
Corequisite: HIT224

HIT223
HIT MANAGEMENT
3 Credit Hours 3 Contact Hours

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.

Prerequisites: HIT222, HIT224
Corequisite: ENG222

HIT224
HEALTHCARE QUALITY IMPROVEMENT
2 Credit Hours 2 Contact Hours

Quality assessment of both departmental functions and medical care; quality improvement as a facility-wide process; utilization review; risk management; and total quality management.

Prerequisites: HIT123, HIT122, HIT124
Corequisite: HIT222

HIT226
HIT PROFESSIONAL PRACTICE I/SEMESTER I
4 Credit Hours 9 Contact Hours

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.

Prerequisite: approval of department head.

HIT227
HIT PROFESSIONAL PRACTICE II/SEMESTER II
4 Credit Hours 9 Contact Hours

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.

Prerequisite: approval of department head.

HIT228
CODING FOR REIMBURSEMENT
4 Credit Hours 6 Contact Hours

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 payors; billing and insurance procedures as they relate to health information management; managed care/capitation; and data quality.

Prerequisites: HIT221, HIT124

HIT229
INFORMATION SYSTEMS IN HEALTHCARE
3 Credit Hours 4 Contact Hours

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.

Prerequisites: HIT224, CAP120, HIT222

HIT230
HEALTHCARE DELIVERY IN THE U.S.
2 Credit Hours 2 Contact Hours

This course focuses on the structure and process of healthcare in the United States. Topics include the historical development of the healthcare delivery system; types of facilities, services, agencies and personnel that constitute the system, critical policy and regulatory issues the system confronts; healthcare financing and reimbursement; and the role of government in healthcare.

Prerequisite: sophomore standing or approval of department head (effective fall 2002)

Special Courses in Health Information Technology Division

HTD201
HEALTH INDEPENDENT STUDY
1 Credit Hour 10 Contact Hours

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.

HTD202
HEALTH INDEPENDENT STUDY
2 Credit Hours 20 Contact Hours

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
HEALTH INDEPENDENT STUDY
3 Credit Hours 30 Contact Hours

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
HEALTH INDEPENDENT STUDY
4 Credit Hours 40 Contact Hours

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.

Massage Therapy

MAS121
MASSAGE THERAPY I
6 Credit Hours 8 Contact Hours

This course introduces students to massage therapy as a healthcare 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.

Prerequisite: admission to massage therapy certificate program.

MAS122
MASSAGE THERAPY II
2 Credit Hours 3 Contact Hours

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.

Prerequisites: MAS121

MAS223
MASSAGE THERAPY REVIEW
2 Credit Hours 2 Contact Hours

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.

Corequisite: MAS226

MAS224
MASSAGE THERAPY III
4 Credit Hours 5 Contact Hours

In this course the students continue to study the practice of massage therapy in both a general and clinical setting.

Prerequisite: MAS122

MAS225
MASSAGE THERAPY IV
2 Credit Hours 3 Contact Hours

In this course students continue to study the practice of massage therapy in both a general and clinical setting.

Prerequisite: MAS224

MAS226
MASSAGE THERAPY V
4 Credit Hours 6 Contact Hours
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.)
Prerequisite: MAS225

Medical Assisting

MAT121
MEDICAL ASSISTING I
4 Credit Hours 6 Contact Hours
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; positioning and draping; measuring visual and hearing acuity; practicing and applying medical and surgical asepsis and infection control and the proper techniques employed in performing irrigation of the eye and ear.
Prerequisite: admission to medical assisting program.

MAT122
MEDICAL ASSISTING II
4 Credit Hours 6 Contact Hours
Course focuses on performing and assisting with advanced clinical skills: venipuncture/specimen preparation compliant with OSHA/CLIA standards, electrocardiography, assisting with minor office surgical procedures, suture insertion/removal, wound irrigation, sterile dressing changes and wound care, gynecological examinations and specimen preparation, urinary bladder catheterization, x-ray preps, and dietary instructions. Documentation of clinical procedures are stressed throughout the course of study.
Prerequisites: MAT121, BIO123

MAT123
MEDICAL ASSISTING III/SEMINAR
3 Credit Hours 4 Contact Hours
The "total concept of patient care" simulation gives medical assisting students the opportunity to incorporate and use their acquired knowledge of clinical and administrative skills in health care delivery while working and managing the S and T Clinic. The S and 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. Students also learn to apply nutritional concepts by planning a 1500 calorie diet. Medical Assisting III precedes Medical Assisting Seminar, fourth semester. Seminar is an integral part of MAIII. Weekly attendance is mandatory. Failure to attend can result in lowering the letter grade for Medical Assisting III and failure to complete graduation requirements. Students will be recertified in CPR before completion of Medical Assisting III.
Prerequisites: MAT122 and approval of department head.

MAT124
MEDICAL TRANSCRIPTION FOR MEDICAL ASSISTING
3 Credit Hours 4 Contact Hours
Course is designed to prepare the student to function as a medical transcriptionist in physician's office, clinic or hospital by the use of authentic medical dictation and computer word processing.
Prerequisites: BIO123, BIO125, CAP120, OAD121, MAT121

MAT221
MEDICAL LABORATORY PROCEDURES FOR MEDICAL ASSISTING
3 Credit Hours 4 Contact Hours
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 include auditory screening and spirometry. Pathophysiology presented is related to tests performed in the physician's office.
Prerequisite: MAT122

MAT222
INSURANCE FOR MEDICAL ASSISTING TECHNOLOGY
4 Credit Hours 5 Contact Hours
This course focuses on developing a knowledge of commercial, government, and managed care programs, efficient use of CPT and ICD-9 coding, and the ability to complete hard copy claim forms. Managerial skills include: determining patient eligibility and pre-certification requirements, patient's financial responsibility by interpretation of explanation of benefits forms, tracking claims, following up on unpaid or denied claims through the appeal process of resubmission of the claim in order to collect proper reimbursement.
Prerequisites: MAT122, MAT124

MAT223
OFFICE PROCEDURES
4 Credit Hours 6 Contact Hours

This course focuses on preparing students for administrative and managerial duties in the medical office. Projects are assigned in scheduling, communication, accounts receivable and payable, medical records management areas and inventory. There is extensive hands-on experience with computer accounts receivable software and office forms. Students demonstrate the ability to organize their work, set priorities, make decisions and integrate their skills with Insurance for Medical Assisting.

Prerequisites: MAT122, MAT124, MTH101, CAP120, ENG124

MAT224
PHARMACOLOGY AND ADMINISTRATION OF MEDICATIONS
4 Credit Hours 5 Contact Hours

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.

Prerequisites: MAT122, MAT124, MTH101

MAT225
EMERGENCY MEDICAL PROCEDURE FOR MEDICAL ASSISTING
2 Credit Hours 3 Contact Hours

This course is designed to enable students to become certified in American Red Cross Community CPR and Community First Aid and Safety. In addition, supplementary information is presented covering manual resuscitation with Ambu bags, administering oxygen, crash carts and incident reports. Ongoing throughout the semester are telephone triaging situations which give the student opportunities to handle many different situations over controlled telephone exercises. Study of the disease process is integrated with illnesses, injuries and treatment covered in the course. Students also research current bioethical issues and present an oral report to the class.

Prerequisite: MAT122

MAT226
OFFICE MANAGEMENT/LAW
3 Credit Hours 3 Contact Hours

This course is designed to prepare potential managers to develop a perspective in managing the physical plant, physician's business practice and employees. The first part of the course deals with basic management principles, problem solving, hiring, training, appraising and disciplining employees as well as employment and anti-discrimination laws. The students develop specific projects in class, as a group or individually. Projects include designing a floor plan, constructing a policy and procedure manual, presenting a patient education lesson, and collectively designing a practice brochure. The last part of the course is designed to present the legal obligations and responsibilities of medical assistants working in the healthcare profession. Course content presents the law, and wherever possible, Ohio law that impacts the medical assistant.

Prerequisites: MAT223, MAT122

MAT227
EXTERNSHIP MEDICAL ASSISTING
2 Credit Hours 12 Contact Hours

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.

Prerequisite: approval of the department head.

MAT228
OPHTHALMOLOGY I
3 Credit Hours 3 Contact Hours

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.

Prerequisites: MAT122, MAT121

MAT229
OPHTHALMOLOGY II
3 Credit Hours 3 Contact Hours

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. **Upon graduation, students are eligible to sit for the national Certified Ophthalmic Assistant (COA) exam sponsored by JRCOMP.**

Prerequisite: MAT228

MAT230
ADVANCED PHLEBOTOMY
3 Credit Hours 4 Contact Hours

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.

Prerequisite: MAT122

MAT231
REIMBURSEMENT FOR HEALTHCARE SERVICE
3 Credit Hours 3 Contact Hours

This course is designed to introduce students to healthcare 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.

Prerequisite: BIO101 (effective fall 2002).

MAT232
HOSPITAL PHLEBOTOMY
3.00 Credit Hours 4.00 Class Hours

This course focuses on anatomy, physiology and medical terminology pertinent to phlebotomy, phlebotomy and microcapillary puncture skill 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 element of the course. Students must attain clinical competency to be eli- gible for the hospital-based phlebotomy experience. Students who suc cessfully complete the course would be eligible to sit for National Certification in Phlebotomy.

Prerequisites: CAL103

Medical Laboratory Technology

MLT121
FUNDAMENTALS OF LABORATORY TECHNIQUES
3 Credit Hours 4 Contact Hours

This course is designed to expose the students to the basic skills techniques, simple instruments used in the clinical laboratory along with the basic medical terminology. Laboratory safety is introduced, including infection control. Laboratory units of measurement, clinical calculations, laboratory statistics; concept of calibration and quality control are introduced. Students are introduced to venipuncture (obtaining blood specimens from the arm) and skin puncture (obtain from the finger).

Prerequisite: admission to the medical laboratory technology program.

MLT122
URINALYSIS
2 Credit Hours 3 Contact Hours

Course is structured to expose the student to the analysis of urine b 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.

Prerequisite: admission to the medical laboratory technology program

MLT123
HEMATOLOGY I
3 Credit Hours 4 Contact Hours

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.

Prerequisite: MLT121

MLT124
HEMATOLOGY II
4 Credit Hours 6 Contact Hours

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.

Prerequisite: MLT121

MLT125
IMMUNOHEMATOLOGY
5 Credit Hours 7 Contact Hours

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.

Prerequisite: MLT121

MLT221
IMMUNOLOGY/SEROLOGY
3 Credit Hours 4 Contact Hours

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.

Prerequisite: MLT125

MLT222
CLINICAL CHEMISTRY
5 Credit Hours 7 Contact Hours

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.

Prerequisite: BIO123

MLT223
CLINICAL MICROBIOLOGY
7 Credit Hours 10 Contact Hours

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.

Prerequisites: MLT121, BIO221

MLT224
DIRECTED PRACTICE
10 Credit Hours 41 Contact Hours

The first part of the course is held in the MLT student laboratory at the College. For the remaining part of the course the student is assigned to clinical laboratory, where the student rotates through the four major departments of a clinical laboratory under the direct supervision of an experienced laboratorian. Experiences will include operating and maintaining laboratory instruments; evaluating the patient results; interaction with the laboratory staff and patients; refining skills in phlebotomy. A seminar accompanies this course.

Prerequisite: admission to the medical laboratory technology and permission of program director.

Medical Transcription Certificate

MTC121
MEDICAL TRANSCRIPTION/TERM I
5 Credit Hours 8 Contact Hours

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.

Corequisites: BIO123, BIO125, OAD121

MTC122
MEDICAL TRANSCRIPTION/TERM II
5 Credit Hours 8 Contact Hours

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.

Prerequisite: MTC121
Corequisites: BIO124, OAD129

MTC123
ADVANCED MEDICAL TRANSCRIPTION
3 Credit Hours 6 Contact Hours

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.

Prerequisite: MTC122
Corequisite: BIO222

Nursing

NUR121
FUNDAMENTAL CONCEPTS IN NURSING
6 Credit Hours 12 Contact Hours

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 healthcare 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.

Prerequisite: admission to the nursing program.

NUR122
NURSING CARE OF THE CHILDBEARING FAMILY
4 Credit Hours 7 Contact Hours

This course focuses on nursing care of the child-bearing family. New trends in maternity-child nursing are included.

Prerequisites: NUR221, ENG124, BIO122, CHM122

NUR123
NURSING CARE OF CHILDREN
4 Credit Hours 7 Contact Hours

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.

Prerequisite: NUR122

NUR201
TRANSITION FOR LPNS
5 Credit Hours 9 Contact Hours

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.

Prerequisite: admission to the nursing program with advanced standing.

NUR221
NURSING CARE OF PERSONS WITH ALTERATIONS IN HEALTH I
6 Credit Hours 12 Contact Hours

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.

Prerequisites: NUR121, PSY121, BIO121, CHM121

NUR222
NURSING CARE OF PERSONS WITH ALTERATIONS IN HEALTH II
8 Credit Hours 16 Contact Hours

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.

Prerequisites: NUR123, PSY123

NUR223
NURSING CARE OF PERSONS WITH ALTERATIONS IN HEALTH III
8 Credit Hours 18 Contact Hours

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.

Prerequisites: NUR222, BIO221, SOC121
Corequisite: NUR224

NUR224
NURSING SEMINAR
1 Credit Hour 1 Contact Hour
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.
Prerequisites: NUR222, BIO221, SOC121
Corequisite: NUR223

Occupational Therapy Assistant Technology

OTA121
FOUNDATIONS OF OCCUPATIONAL THERAPY
3 Credit Hours 4 Contact Hours
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.
Prerequisite: acceptance in the occupational therapy assistant program.

OTA122
THERAPEUTIC MEDIA
3 Credit Hours 6 Contact Hours
Introduces the student to therapeutic use of activities. Includes skill development in selected activities in the areas of play/leisure skills, work performance and use of therapeutic adaptive equipment.
Corequisite: OTA121

OTA123
PSYCHOSOCIAL ASPECTS IN OCCUPATIONAL THERAPY
4 Credit Hours 4 Contact Hours
Instruction in occupational therapy theories and treatment for individuals with psychiatric and/or social impairments. Emphasis on therapeutic application of self, group dynamics, relaxation techniques and therapeutic use of activities to promote psychological well-being and enhance occupational performance.
Prerequisites: OTA121, OTA122, PSY121
Corequisites: OTA124, PSY221

OTA124
PSYCHOSOCIAL CLINICAL EXPERIENCE
3 Credit Hours 5 Contact Hours
Skill development in group processes and didactic interactions. Supervised work experience and interactions with persons who have psychological dysfunctions.
Prerequisite: OTA121
Corequisite: OTA123

OTA221
DEVELOPMENTAL ASPECTS IN OCCUPATIONAL THERAPY
4 Credit Hours 4 Contact Hours
Identification and description of handicapping conditions existing from birth or early childhood. 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.
Prerequisites: BIO123, OTA121
Corequisites: OTA222, OTA223, PTA226

OTA222
DEVELOPMENTAL CLINICAL EXPERIENCE
3 Credit Hours 5 Contact Hours
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.
Prerequisites: OTA121, BIO123, OTA123, OTA124
Corequisite: OTA221

OTA223
LIFE SPAN DEVELOPMENT
5 Credit Hours 5 Contact Hours
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.
Prerequisite: ENG124

OTA224
OCCUPATIONAL THERAPY IN PHYSICAL DYSFUNCTION
4 Credit Hours 4 Contact Hours
Instruction in occupational therapy theories 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.
Prerequisites: OTA222, OTA223, PTA226
Corequisites: BIO124, OTA225

OTA225
PHYSICAL DYSFUNCTION CLINIC
3 Credit Hours 5 Contact Hours
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.
Prerequisite: OTA222
Corequisite: OTA224

OTA226
OCCUPATIONAL THERAPY ASSISTANT SEMINAR
2 Credit Hours 2 Contact Hours

Examination and discussion of the professional roles and responsibilities of the occupational therapy assistant. Includes exploration of traditional and non-traditional roles, such as activities coordinator and case manager orientation to licensure; legal aspects of treatment and documentation.

Prerequisites: OTA224, OTA225

OTA227
CLINICAL APPLICATIONS I
3 Credit Hours 40 Contact Hours

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.

Prerequisites: OTA224, OTA225
Corequisite: OTA226

OTA228
CLINICAL APPLICATIONS II
3 Credit Hours 40 Contact Hours

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.

Prerequisites: OTA224, OTA225
Corequisite: OTA226

Physical Therapist Assistant Technology

PTA121
FUNDAMENTALS OF PHYSICAL THERAPY
4 Credit Hours 5 Contact Hours

The student is introduced to the field of physical therapy, basic standards of practice, current professional issues and interaction with other health professionals. The student is instructed in monitoring vital signs, infection control procedures, principles of body mechanics, transfer techniques, range of motion, massage and selected conditions and treatments.

Prerequisite: admission to physical therapist assistant technology.
Corequisite: BIO123

PTA122
MUSCULOSKELETAL ANATOMY
4 Credit Hours 5 Contact Hours

An in-depth study of the musculoskeletal system including: bone and bony landmark locations; skeletal muscle locations and actions; and the actions and planes of movement available and the types of muscle contractions which can occur at the synovial joints. A basic study of skin is presented.

Prerequisite: admission to physical therapist assistant technology.
Corequisite: BIO123

PTA123
KINESIOLOGY
4 Credit Hours 5 Contact Hours

The study of human anatomy emphasizing the biomechanics, motion and peripheral innervation of the musculoskeletal system as a basis for the development of exercise and gait programs. The fundamentals of posture, muscle physiology, muscle function and gait analysis and strength will be covered.

Prerequisite: PTA122
Corequisites: PHY101, PTA221

PTA124
MEASUREMENT PROCEDURES FOR PHYSICAL THERAPIST ASSISTANT
2 Credit Hours 3 Contact Hours

The student will learn techniques and documentation procedures for therapeutic measurement skills including goniometry and manual muscle testing.

Prerequisites: PTA122, PTA123

PTA125
PROFESSIONAL CLINICAL PRACTICE FOR PHYSICAL THERAPIST ASSISTANT
1 Credit Hour 1 Contact Hour

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.

Prerequisites: PTA121, PTA221

PTA221
PHYSICAL THERAPIST ASSISTANT PROCEDURES I
5 Credit Hours 7 Contact Hours

The student is instructed in physical therapy procedures and laboratory skills: modality usage; therapeutic exercise; and gait training with assistive devices. The student is taught SOAP note-writing. An abstract of a professional journal is a requirement of this course.

Prerequisite: PTA122
Corequisite: PTA123

PTA222
PTA PROCEDURES II
5 CREDIT HOURS, 7 Contact Hours

This course will present to the students the impairments, disabilities, and interventions of selected musculoskeletal, rheumatological and cardovascular conditions including spinal disorders and amputations. Also included will be an overview of CNS anatomy and physiology, sensory integration, motor development and motor control. Students will perform selected interventions under direct supervision of licensed personnel with patients as part of the laboratory component of this course.

Corequisite(s): BIO124, PTA228, PTA221

PTA223
PTA PROCEDURES III
2 Credit Hours 3 CContact Hours

This course will include pathophysiology and treatment of CNS disorders and will include, but not be limited to, spinal cord injuries, strokes and developmental disabilities. An abstract of a professional journal article on a related topic will be required.

Corequisite(s): PTA222, PTA230

PTA226
FUNCTIONAL ANATOMY
4 Credit Hours 5 Contact Hours

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.

Prerequisite: BIO123, PHY101 recommended.

PTA227
DIRECTED PRACTICE III
3 Credit Hours 15 Contact Hours

Selected clinical experience in various physical therapy settings under direct supervision. Grading: credit/fail

Prerequisites: PTA223, PTA231

PTA228
SEMINAR I
2 Credit Hours 2 Contact Hours

Presentation of topics related to clinical practice to include ethics and professional development.

Prerequisite: PTA221

PTA229
DIRECTED PRACTICE I
3 Credit Hours 16 Contact Hours

Clinical experience in various physical therapy departments under direct supervision. Grading: credit/fail

Prerequisite: PTA221

PTA230
SEMINAR II
1 Credit Hour 1 Contact Hour

Presentation of diverse clinical issues and approaches to patient management.

Prerequisite: PTA222

PTA231
DIRECTED PRACTICE II
2 Credit Hours 10 Contact Hours

Clinical experience in various physical therapy departments under direct supervision. Grading: credit/fail

Respiratory Care Technology

RCT121
INTRODUCTION TO RESPIRATORY CARE PROCEDURES
3 Credit Hours 4 Contact Hours

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.

Prerequisite: admission into the respiratory care technology.

RCT122
MEDICAL GAS ADMINISTRATION
3 Credit Hours 4 Contact Hours

An introduction to the basics of oxygen administration, aerosol and humidification therapy.

Prerequisite: admission into the respiratory care technology.

RCT123
AIRWAY MANAGEMENT PROCEDURES
3 Credit Hours 4 Contact Hours

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.

Prerequisites: RCT121, RCT122

RCT124
PHARMACOLOGY FOR RESPRATORY THERAPY
2 Credit Hours 2 Contact Hours

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.

Prerequisite: BIO123
Corequisites: RCT121, RCT122, RCT123

RCT125
CLINICAL PRACTICE – BASIC PROCEDURES/SEMINAR
3 Credit Hours 17 Contact Hours

Hospital-acquired experiences consisting of the practical application of principles presented in Introduction 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 andintermittent positive pressure breathing therapy.

Prerequisites: RCT122, RCT121

RCT126
INTRODUCTION TO CRITICAL CARE
3 Credit Hours 4 Contact Hours

An orientation to the principles related to the care of the critical ill patient with an emphasis on mechanical ventilation.

Prerequisites: RCT124, RCT123
Corequisite: RCT127

RCT127
CARDIOPULMONARY ANATOMY AND PHYSIOLOGY
3 Credit Hours 3 Contact Hours

An orientation to the anatomy and physiology of the respiratory system and the cardiac system.

Prerequisites: BIO123, RCT123, RCT124

RCT128
CLINICAL PRACTICE – AIRWAY MANAGEMENT/SEMINAR
2 Credit Hours 9 Contact Hours

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.

Prerequisites: RCT125, RCT123, RCT124

RCT221
ADVANCED RESPIRATORY CARE PROCEDURES
3 Credit Hours 4 Contact Hours

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.

Prerequisites: RCT127, RCT126

RCT222
RESPIRATORY DISEASES
3 Credit Hours 3 Contact Hours

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.

Prerequisites: RCT127, RCT124

RCT223
PATIENT ASSESSMENT AND MONITORING
3 Credit Hours 3 Contact Hours

Exposure to various procedures and techniques associated with the monitoring and evaluation of the patient with cardiopulmonary disease.

Prerequisites: RCT221, RCT222

RCT224
CLINICAL PRACTICE – CRITICAL CARE/SEMINAR
3 Credit Hours 17 Contact Hours

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.

Prerequisites: RCT126, RCT124, RCT127, RCT128

RCT225
CLINICAL PRACTICE SPECIALTY ROTATIONS/SEMINAR
5 Credit Hours 24 Contact Hours

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.

Prerequisites: RCT224, RCT127, RCT221, RCT222

BUSINESS TECHNOLOGIES

Accounting Technology
CPA Option
Corporate Option
EDP Option
Bookkeeping Certificate

Administrative Information Technology
Administrative Information Certificate

Business Management Technology
Health Services Option
International Business Option
Small Business Option

Computer Technology
Application Developer Track
AS/400 Track
Database Administrator Track
Database Developer Track
Microcomputer Integration Track

E-Business Programming Technology – Pending
E-Commerce Application Developer Track
E-Commerce Web Server Administrator Track

Financial Services Technology

Information Reporting Technology
Judicial Reporting Track
Captioning Option – Under Development
Realtime Transcription Option – Under Development

Legal Assisting Technology

Marketing Management Technology
E-Commerce Option
Retailing Option
Sales Option

Microcomputer Applications Technology
Software Support Specialist Track

Operations Management Technology

ENGINEERING TECHNOLOGIES

Applied Industrial Technology
Welding Option

Automotive Engineering Technology
General Motors ASEP Option
Toyota T-Ten Certificate

Civil Engineering Technology
Architectural Major
Surveying Major

Computer Networking and Telecommunications Engineering Technology
Network Administration Option

Computer Science and Engineering Technology
Online Software Design Option
University of Toledo Transfer Option

Design Engineering Technology

E-Solutions Technology

Electric Power Utility Technology

Electrical Engineering Technology

Electrical Maintenance Technology

Electronic Engineering Technology

Environmental Technology

Heating, Ventilation and Air Conditioning Technology

Industrial Engineering Technology

Interactive Media Technology
Graphic Arts Design Option
Macromedia® Development Option
MIDI Option

Mechanical Engineering Technology

GENERAL STUDIES AND PUBLIC SERVICE TECHNOLOGIES

Early Childhood Education Technology

Fire Science Technology
EMT Certification

Human and Social Service Technology
Gerontology Option

HEALTH TECHNOLOGIES

Dental Hygiene

Health Information Technology
Medical Transcription Certificate

Massage Therapy
Massage Therapy Certificate

Medical Assisting

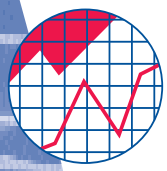
Medical Laboratory Technology

Nursing (ADN)
LPN to RN

Occupational Therapy Assistant Technology

Physical Therapist Assistant Technology

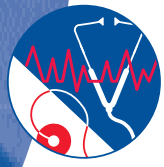
Respiratory Care Technology



Business Technologies

Engineering Technologies

General Studies and Public Service Technologies



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